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SOME CASES OF URINARY DISEASE IN CHILDREN.

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WHEN an attempt is made to write something about the diseases of the urinary apparatus in children, the question naturally is put for consideration as to whether there are any diseases of this tract peculiar, or nearly peculiar, to children. Are there any diseases such as, for example, the acute infectious fevers or rheumatism, or tuberculous meningitis, which are more common in children than in adults, and which are amenable to, or commonly treated by, recognised surgical methods?

The answer to this question is as difficult as the answer to the more general question as to whether or not there are any diseases peculiar to children. Incontinence of urine of a functional nature, although perhaps not common in children, is yet not infrequently found in adults. Traumatic stricture of the urethra, although not very common in adults, can hardly be considered as peculiar to children, as older people might acquire exactly the same condition had they the time, the inclination, or the power to play the same gymnastic pranks.

Certain conditions, some of which have already been mentioned, do appear to occur more commonly in children than in older people.

Congenital defects, which are not incompatible with life, may be found in older people, and therefore can hardly be considered under the heading of children's diseases. It is, in fact, in their prognosis and treatment that diseases in the urinary tract of children, as elsewhere, differ from otherwise similar conditions of adults.

Urinary disease, of such a nature as to demand surgical attention, is not so common in children, although it may be of the same type as in adults. The comparative rarity of such disease in children calls for some explanation, which may be supplied by the fact that very many obstructive conditions which are present in the adult are absent in the child.

No one can doubt that stricture of the urethra, enlarged prostate, pregnancy, and pelvic tumour may be responsible for many of the cases of urinary disease by producing obstruction to the flow of urine, and subsequent, possibly consequent, infection of the urinary passages. Now, these cases are absent in the young child, with the exception of stricture of the urethra, which is not uncommon in the form of traumatic stricture, and unfortunately this condition may not give rise to serious complications until the patient has attained riper years than those of a child, for as long as the bladder muscle is responding to the increased work thrown upon it by the efforts which must be made to overcome the obstruction to the passage of urine along the narrowed urethra, so long will symptoms of disease be in abeyance. It is only when the bladder muscle has failed, or is failing, that symptoms of urinary disease will manifest themselves.

TUBERCULOUS PERITONITIS AS A CAUSE OF URINARY DISEASE.

There is, however, an obstructive condition which may be present in children and which may produce serious symptoms, necessitating the interference of the surgeon. This condition is not uncommon and has hardly received the attention it deserves. Tuberculous peritonitis and abdominal adenitis may lead to constriction of the ureter, and symptoms of renal colic may develop in consequence.

A young child of either sex is brought by its parents with a history of severe radiating pain in one loin and occasional hæmaturia. X rays may reveal a shadow in the region of the upper urinary tract, which suggests the possibility of stone. An exploratory incision is made and no stone found. In such cases very careful examination of the ureter should be performed, and not infrequently it will be found that there are peritoneal bands binding the ureter down to the posterior abdominal wall, or even kinking it, or there may be a small

mass of tuberculous glands pressing upon the ureter and leading to obstruction to the flow of urine along this tube. Twice have I cut down upon such a condition. In support of these personal, clinical, and operative observations a perusal of post-mortem records at Guy's Hospital reveals that, during twenty years, there were about twenty cases of tuberculous peritonitis in which the reports state that there was some evidence of obstructive conditions in the ureter, as, for example, a small hydronephrosis of the pelvis of the affected kidney. It is not stated that such occurrences were associated with marked renal conditions, but they afford confirmatory evidence of the previous operative experience recorded above. Tuberculous peritonitis or adenitis may, therefore, be regarded as a possible obstructive condition giving rise to symptoms of urinary disease. Cystoscopy, the passage of a ureteric catheter, and the injection of some opaque material into the pelvis of the kidney, with examination by means of X rays, should enable a diagnosis to be made between a calculus situated within the upper urinary tract and calcified tuberculous glands producing pressure upon the ureter from without. Another condition, purely anatomical, may, when symptoms of renal colic are present, lead to a mistaken diagnosis when X rays are used as an adjunct to the elucidation of the case. The epiphyses of the transverse processes of the lumbar vertebræ may not appear either at the same time or symmetrically, and if there be only one present, perhaps in the third or fourth lumbar vertebra, and there be symptoms of renal colic, unless an opaque catheter be passed so as to identify the position of the ureter relative to the shadow cast by the epiphysis of the transverse process, a wrong diagnosis may be made. Care, however, must be taken not to insist that wrong treatment has been employed in such cases when an operation designed to remove the supposed stone is undertaken. Such treatment, although in the present state of our knowledge it may be empirical, is sometimes followed by most happy results, possibly by fixation of a movable kidney, following upon the operation, possibly by the mental effect produced upon the little patient by the operation, and by the reliance which a child who is in pain will place in anyone who is trying to do his best for him sympathetically.

PYONEPHROSIS.

This condition occurs in children, and follows upon, or rather, is associated with, the presence of renal calculi, or it may occur consequent upon the presence of aberrant vessels, or some definite fibrous

tissue formation leading to kinking of the ureter; but before selected cases are offered in illustration of this type of case, the question will very naturally be raised as to the reason of aberrant vessels failing to cause symptoms of urinary obstruction until the years of infancy and childhood are passed. The answer depends upon a correct knowledge of the topographical anatomy of the kidney at all ages. If a full-term foetus be examined, it will be found that the lower poles of both kidneys lie on the same plane as the umbilicus and only about 2 cm. above the plane of the anterior superior spine, which bony landmarks, owing to the obliquity of the pelvis not being so pronounced in the foetus or young child, are situated relatively higher in such subjects than in older people. The kidneys therefore lie at a lower level in young subjects than in older persons. As age advances the kidneys rise higher and higher in the abdominal cavity until they reach their normal position—in close relation to the last rib.

If now we turn our attention to the liver of the full-term foetus we shall find that it appears to occupy much more space in the abdomen of the foetus than in that of the adult. This appearance, however, is very deceptive, for if the liver be carefully excised we shall find that its shape is very similar to that of the adult. The fact is, that although the liver may appear much larger in young subjects than in adults, relative to the body cavity, the true criterion of its size is not to be found in its appearance when the abdomen is opened, but in its relative weight to that of the whole body, which is probably increased. As age advances, the liver rotates to the right upon an antero-posterior axis and backwards upon a transverse axis, so that more of the liver comes to lie upon the right side of the middle line and upon the posterior surface of the abdominal wall. Obviously therefore as this double rotation takes place, the right kidney will be prevented from moving as far up as the left kidney.

When aberrant vessels are present, as the kidney is ascending there can be no tendency for the ureter to become kinked over the aberrant vessels, and it is only when the kidney has reached its normal position, and then been dislocated or has become movable, that the ureter becomes kinked over the aberrant vessels.

If these anatomical facts and logical deductions be kept in mind, it will not be surprising that only one illustrative case of pyonephrosis due to aberrant blood-vessels is to be recorded in this paper.

Case of pyonephrosis due to aberrant blood-vessels.—Alice S—, aged 13 years, admitted into Martha Ward, Guy's Hospital, under the care of Sir W. A. Lane, She was transferred to my care by that

surgeon ; to him I desire to offer my cordial thanks. For about a year previous to her admission to Guy's Hospital on August the 15th, 1917, the patient had experienced pain in her right side. This pain was so severe as to compel her mother to seek advice. She went to two hospitals, but only obtained temporary relief. Finally, she was admitted into Guy's Hospital. On admission, she complained of pain in the right iliac fossa, which extended behind over the right iliac crest in the lumbar region. She stated that the pain was worse in the evening. She slept well, but had the pain when she woke up in the morning. There was no difficulty in micturition, and the bowels acted regularly. Pulse, 104 ; temperature, 99° F. ; respirations, 24. Urine had a specific gravity of 1010, reaction neutral, and there was a slight deposit of phosphates and mucus. On microscopical examination a few red blood corpuscles could be seen. There was occasionally a trace of albumin. No casts could be detected. The patient was X-rayed, and it was thought that there was a stone in the left kidney, but this opinion was not maintained after a second X-ray examination had been made. The right kidney was palpable, but not markedly so. The urea in the blood was found to be of normal percentage. On account of the abnormal urine, the pain in the right side, and the fact that the right kidney was palpable—all points in favour of some lesion in connection with the right kidney—it was decided to cut down upon this organ. The ordinary lumbar incision was made, and after the usual preliminary dissection the kidney was easily brought into the wound. The pelvis was very markedly dilated, and the dilatation was cut off sharply below from the normal ureter. At the site of division between the dilated pelvis and the normal ureter a leash of aberrant blood-vessels was found. These were divided between ligatures. The pelvis was incised, and about half an ounce of purulent fluid escaped. The kidney was replaced, a catheter was used to explore the ureter with negative results, and a gauze drain was inserted as far as the wound in the renal pelvis. Recovery ensued without complications, and the patient was discharged on September the 24th, 1917, perfectly well and having lost her pain.

It is clear that such a condition as that of aberrant blood-vessels should be treated by surgical methods, when it is suspected, as much, and, possibly, irremediable damage may be done to the affected kidney during the stage of waiting for symptoms to subside. The above case is a good illustration of this important rule, as pyonephrosis had already developed.

Two further cases occurring, however, in older people may be

cited as evidence in favour of surgical intervention as soon as possible. The first was a well-built and actively disposed girl, who was aged 17 years, at the time of operation, but who had had severe attacks of right renal colic and hæmaturia for some years. No stone had been discovered by means of X rays. Collargol injection of the right ureter and pelvis of kidney revealed a small hydronephrosis. As a calculus was not found by X rays, and as there was no evidence of any inflammatory condition of the kidney, the presence of aberrant vessels was suspected, and an exploratory operation performed. Aberrant blood-vessels were found constricting one division of a double ureter coming from the lower pole of the kidney. These were divided between ligatures, and the patient completely lost her pain and hæmaturia.

The second case is as follows: A youth, aged 22 years, who had been laid up for years with right-sided pain and hæmaturia, was found to have a well-marked hydronephrosis and aberrant blood-vessels. The kidney substance was much atrophied, and undoubtedly delay in operating had led to permanent damage to the kidney. The first case shows that aberrant blood-vessels may cause serious symptoms at an important time in the child's life, and it may be repeated that such a condition should be treated by surgical means.

Pyonephrosis may also be due to the presence of calculi—and I have removed, from a lad aged 8 years, a large pyonephrotic kidney in the cavities of which were found mixed calculi.

A case may be quoted here in which fibrous adhesions which were not obviously due to tuberculous peritonitis had led to kinking of the ureter.

A boy, aged 8 years, was admitted under the care of my colleague, Dr. H. C. Cameron, who observed a large swelling in the right side of the abdomen, and asked me to see the case with him. There was slight pyuria and considerable pyrexia especially in the evening. The child was obviously ill. The patient was cystoscoped, and, although no pus was detected descending from the right ureter into the bladder, there were well-marked red ulcerated patches adjacent to the right ureteric orifice. The patient was transferred to my ward, and, with the concurrence of Dr. Cameron, an exploratory operation was performed. There was no difficulty in exposing and delivering the kidney through a lumbar incision. The organ was large and felt flaccid. It was turned forwards, and the pelvis of the kidney and upper parts of the ureter thoroughly exposed. The upper part of the ureter

was kinked, and above the kink there was a much dilated pelvis which was deliberately incised for a distance of $1\frac{1}{4}$ in. on its posterior aspect. Pus escaped from the pelvis and two or three large cavities in the kidney substance itself. These cavities had smooth walls. The cause of the condition was not obvious until my dresser, Mr. R. Jones, pointed out a firm fibrous mass lying between the upper part of the right ureter, and the inferior pole of the right kidney. By placing the kidney back into its original position it was observed that the fibrous condition had led to kinking of the ureter. There were no aberrant vessels. The fibrous adhesions were carefully dissected away, the kidney stitched in position, and the boy made an uneventful and complete recovery. The cause of the fibrous adhesions remains obscure.

Renal calculi may occur at an early age. For the ultimate cause of their formation we may have to go back to very early life. In a large number of autopsies which have been made by my medical colleagues at Guy's Hospital an interesting fact becomes apparent. In the pelvis and kidney substance, but especially the former, uric acid, sand, concretions, or even very small calculi may be found after death from marasmus, or an acute infectious disease, with which considerable wasting has been associated. It is not unreasonable to assume that these concretions may be the origin of larger stones and the formation of definite calculi.

It is important to note that in children the symptoms of renal calculus may occur on that side which is not affected. Thus, in a boy, aged 10 years, under the care of my colleague, Dr. John Fawcett, definite left-sided pain was complained of, but X rays, confirmed by an operation, showed one calculus in the pelvis of the right kidney and two or three in the substance of the organ.

VESICAL CALCULI.

We may now briefly consider the symptoms and treatment of stone in the bladder of young children. In one case under the care of Mr. L. A. Dunn, at Shadwell Children's Hospital, the course of the stone along the whole urinary tract could be demonstrated by the symptoms. There was renal pain and hæmaturia, renal colic and hæmaturia, cessation of renal pain, evidence of bladder irritation such as frequency of micturition, finally, overflow incontinence, and the presence of an impacted calculus in the terminal portion of

the urethra. But such a train of clinical symptoms is uncommon. There is rarely evidence of formation of stone in the kidney or of its passage along the ureter into the bladder. Impaction of a stone in the urethra is not of as common occurrence as the presence of a vesical stone. Frequency and incontinence are, in my experience, the most frequent classical symptoms of vesical calculus. The occurrence of an "adenoid" type of face is too frequent to be accidental, but, although the removal of the adenoids may remove a common cause of disease, it will hardly effect a cure of the stone condition. All suspected cases of vesical calculus should be X-rayed, but complete reliance cannot be placed upon this method of diagnosis, as I have known at least one case in a young child in which a negative report was received. In this case sounding the bladder, followed by suprapubic lithotomy, demonstrated the existence of a stone 1 in. long by $\frac{1}{2}$ in. thick.

The important question which must now be considered concerns the treatment. Shall a suprapubic lithotomy be performed or a lithotripsy?

If a suprapubic lithotomy is proposed, it is all important that a cystoscopy should be performed in order that as an accurate a diagnosis as possible should be made before the operation. By accurate diagnosis, with the aid of the cystoscope, is meant localisation of the stone, knowledge as regards the size and appearance of the stone, and, above all, the condition of the bladder itself. The difference in anatomical relation of the bladder in children from that of adults, and the difference in thickness of the wall of an infant's bladder from that of an adult's bladder do not prelude a lithotripsy, but an incomplete preliminary examination of the bladder by means of a cystoscope may fail to show us that there are sacculi at the base of the bladder, and that there are oxalate calculi present in the bladder, which may or may not be situated in the sacculi. Oxalate calculi are hard, and when broken by means of the lithotrite the fragments may "fly" and impinge with great force against the walls of the sacculi, which, it will be remembered, are very thin and formed only of mucosa and peritoneum, and damage may be done to the peritoneum of a most disastrous nature. Needless to say, a lithotripsy would not be attempted in those cases in which the stone lay actually in a sacculus. A case of such a type has occurred in my experience, and in a young patient, and the rule should be made that never must a lithotripsy be undertaken without a preliminary cystoscopy. Why should we operate in the dark when the illuminating rays of a cystoscopic lamp will guide us to the right line of treatment?

In my experience the prognosis of stone in the bladder of young children is not good. The stones are apparently septic in origin, at any rate, in some cases; the bladder is septic at the time of operation; there is an open wound left which may easily become infected even if every case against external contamination is taken; small wonder, then, that there may be a recurrence of the stone again and again, with eventual ascending nephritis. A case may be quoted as an illustration of this general statement. It is the only one which has fallen to my lot, but since its occurrence I have come to regard vesical calculus occurring in a child, especially a young child, as a very serious condition.

The following notes refer to George M—, aged $4\frac{1}{2}$ years: The patient suffered from adenoids and was a mouth-breather. Apparently fairly well nourished. Adenoids were scraped on February the 16th, 1914. He also had frequency of micturition and incontinence at nights. A stone was discovered by means of X rays lying in the bladder. On February the 24th lithotripsy was attempted, but abandoned, as the stone was very large. A suprapubic lithotomy was at once performed, and a stone measuring $1\frac{1}{2}$ in. long by 1 in. broad and $\frac{3}{4}$ in. thick was removed. Examination revealed a mixed calculus, consisting chiefly of compact uric acid; it was not obviously laminated. The bladder wound was left open and drained. It healed up in about three weeks' time, and the patient was discharged very much better in appearance without frequent micturition and nocturnal incontinence. He did not continue to attend Guy's Hospital, but on July the 10th, 1914, he was readmitted. The mother said that since his discharge he had suffered from incontinence of urine and fæces. Suprapubic cystotomy was again performed, and a large stone removed. The bladder wall was covered with putty-like material, which felt gritty. This was removed by irrigation. The wound was not sewn up and healed in the ordinary way. He was readmitted on December the 16th, 1914, with evidence of double pyelonephritis, and death occurred about Christmas, 1914. Double pyelonephritis, ureteritis, and cystitis were found at the autopsy, but no vesical calculus. There was no evidence of any other disease, such as tubercle.

TRAUMATIC STRICTURE OF THE URETHRA.

This condition is not uncommon in children following upon injuries to the perineal region, and also in association with fractured pelvis. If a ruptured urethra is associated with a fractured pelvis it must

be remembered that the fracture is, strictly speaking, compound, and every aseptic precaution should be taken in catheterising the urethra.

There is not space to discuss the vexed question of immediate suture of the urethra when it has been ruptured by an accident ; we are merely concerned here with the symptoms and treatment of traumatic stricture following upon injury to the urethra. The medical man in attendance upon the case must not be misled by the good stream with which the patient passes his water. As has already been stated in this paper, it is not until the bladder muscle is failing, or has failed, that difficulties in micturition become manifest. It not infrequently happens that a patient has a perfectly good stream during micturition, and it is quite impossible to introduce the smallest bougie or catheter through the stricture. These children and young people with traumatic stricture are not good lives. The average age of death from complications of traumatic stricture, from a necessarily small number of cases, is forty-four, but for long before death such lives are rendered quite useless by abortive attempts at cure by the passage of catheters, the production of false passages—the introduction of sepsis into the lymphatics of the urinary system, and other amenities of that life which is dignified with the epithet “catheter.”

Excision of the strictured area is the form of treatment for all these cases. In many cases the stricture is merely a fibrous diaphragm in the middle of the spongy portion of the penis, as a rule not more than four inches from the *meatus urinarius*. This can be easily excised by exposing the urethra, making a longitudinal incision in the urethra, exposing the stricture, identifying its boundaries, and cutting through the urethra behind and in front of the stricture and then suturing the divided ends of the urethra—putting a moderately large catheter into the bladder through the urethra—sewing up the superficial wound, and applying an anchor dressing. An important point is to be noticed. The punctured urethra should be buried in the penis as deeply as possible. An efficient way of insuring this is to put Lembert sutures in the tissues of the penis, superficial to the urethra, and tying them securely so that a broad area of superficial tissue is in contact on each side of the wound. One cause of failure of some of these wounds to unite is to be found in a want of appreciation of this point, with the result that the urethra is lying near the surface, and is therefore liable to sepsis occurring during the after-treatment. In none of my cases have I failed to obtain complete union, and I believe this happy

result to be due to my always burying the urethra as deeply as possible in the penis.

When a catheter is tied into a child's bladder through the penis, irrigation of the bladder at least once a day is very necessary.

SUMMARY.

(1) Cases of urinary disease in children are not so common as in adults, owing, perhaps, to the want of obstructive causes, such as enlarged prostate or pregnancy.

(2) Obstructive lesions, however, may occur following upon tuberculous peritonitis and adenitis.

(3) Pyonephrosis may occur due to aberrant blood-vessels, renal calculi, or fibrous adhesions kinking the ureter.

(4) Vesical calculus in children has a bad prognosis; a lithotripsy should always be preceded by a cystoscopy.

(5) Traumatic stricture of the urethra has a bad outlook, and, if possible, should be excised and buried deeply.

ERYTHEMA NODOSUM ASSOCIATED WITH TUBERCULOSIS.

By E. BRONSON, A.B., M.D.

THE following case is not published with the assumption that erythema nodosum is a tuberculous condition, but simply to put on record an instance in which a tuberculous pleural effusion supervened in a typical example of this eruption.

Case history.—A boy, aged 9 years, was admitted to the Paddington Green Children's Hospital, under Dr. G. A. Sutherland, on April the 7th, 1917, for pains in the abdomen.

Family history.—Negative for rheumatism, chorea, and tuberculosis.

Past history.—Breast fed as an infant. Whooping cough and bronchitis at three years, and measles at four years. Usually healthy. No rheumatic history and no sore throats.

Present illness.—Ten days before admission he came home from school with pain in the abdomen. He was sick that night and again the next morning. Since the onset he has had sharp pains lasting a minute in the pit of the stomach three to four times daily. The bowels have been regular. He has appeared tired out, though not

ill enough to stay in bed. Six days ago he complained of pain in the left leg, and his mother noticed an isolated, red, tender spot on the left shin. He has been cold to touch, rather than hot, though perspiring at night. He has had no further sickness, no sore throat, and no cough.

Condition on admission.—A rather under-nourished, ill-looking child, with sallow complexion, sunken eyes, walking into the hospital and complaining of pain in the abdomen and left leg.

Skin.—Dry, cool, and rather rough. About midway on the left tibia is a reddish, tender nodule 2×3 cm. in diameter, with definite local temperature. No corresponding nodule on the right shin, but just above the right knee are two slightly raised reddish papules $1 \times 1\frac{1}{2}$ cm. in diameter. No similar spots on the arms or body.

Joints.—No swelling nor tenderness in any joints.

Glands.—No enlargement, not even in the left inguinal.

Abdomen.—Soft. No resistance to palpation. The liver is fully 4 cm. below costal margin in nipple line. No tenderness.

Digestive system.—Tongue slightly coated. Several carious teeth. Tonsils and pharynx a little congested only.

Respiratory system.—Nothing abnormal found. Free expansion.

Circulatory system.—Apex beat felt 2 cm. outside the nipple line. Slight pulsation to right of sternum. Heart-sounds are weak and distant, and a systolic murmur heard best over præcordium is present. Pulse 100, soft, low tension in type.

Urine.—Neutral, no albumin, trace of acetone, microscopical examination negative.

Progress.—April the 8th: Many nodules, typical of erythema nodosum on legs and thighs to-day.

Von Pirquet very positive in twenty-four hours.

April the 9th: General condition much better. No abdominal pain since admission. Large nodule on left shin is disappearing. Numerous smaller but similar nodules over legs and few on thighs. None elsewhere. The apex beat is now inside nipple line, and the sounds are stronger. A systolic murmur, not transmitted to the axilla, is still present. The liver is 2 cm. below the costal margin. Afternoon temperature, about 100° F.; morning, normal or subnormal.

April the 14th: Feels well. Slight afternoon temperature. The nodules and papules have not entirely disappeared.

April the 15th: A large nodule has appeared on the right shin. Patient says he has no pain, and seems happy. The pulse-stays rather rapid, 100 to 120.

April the 18th: Yesterday many nodules, or rather papules,

appeared on both legs. None of these are over 2 cm. in diameter, and none tender. Patient still looks ill, but plays in bed, and is happy. Temperature remains nearly normal.

April the 23rd: A fresh crop of nodules, this time on the extensor surfaces of arms. Afternoon temperature, 101° F. for two days. Heart as before. There is nothing to point to rheumatic infection of the heart.

April the 26th: The afternoon temperature has been high for several days, 102°·8 F. last night, 100° F. this morning. Pulse 130. Patient sits up and makes no complaint. Chest examined last night. Cardiac dulness slightly to right of sternum. No dyspnoea. Percussion note flat, and breath-sounds much diminished over left lower back, axilla, and front. To-day flatness to the level of the fifth dorsal vertebra in back. Marked tubular quality of breath-sounds and fine crepitations at left apex. Heart dulness 2 cm. to right of sternum, and definite dyspnoea. There is a fresh crop of nodules to-day.

Thoracentesis.—15 oz. of clear, light yellow fluid removed, which gave a cloudy coagulum, and showed abundant proteids. No organisms demonstrated. Differential cell-count. Lymphocytes 82 per cent., polymorphonuclears 10 per cent., endothelial cells 1 per cent., unclassified 8 per cent.

April the 29th: No fresh nodules, and old ones are disappearing. Patient feels well, and is active in bed. No subjective respiratory distress. Respirations 80, however, and pulse stays rapid. Heart dulness 2 cm. to right of sternum. Flat note over left chest as before thoracentesis. Irregularly swinging temperature between 99° and 103° F., highest at 5 p.m.

Blood examination.—Hæmoglobin, 100 per cent.; red cells, 4,200,000; leucocytes, 8500. Differential count: Polymorphonuclears, 58 per cent.; small mononuclears, 22 per cent.; large mononuclears, 20 per cent.

May the 1st: Patient breathes more rapidly, but makes no complaint; in fact, says he feels well. On examination of his chest the flat note has extended nearly to the lung apex on the left, and cardiac dulness is 3–4 cm. to the right of the sternum, with epigastric, sub-sternal, and right-sided pulsation, and no cardiac impulse is felt to the left of the sternum. Breath-sounds are tubular over and above the præcordial area. Temperature is still swinging. No more nodules.

May the 4th: Condition the same, with temperature from 99° to 102° F.

May the 7th : The von Pirquet test was repeated and is positive in twenty-four hours, though no extreme reaction now. The temperature is lower and more irregular—not the regular afternoon rise. The chest remains about the same as on May the 1st.

May the 10th : Patient shows rather more dyspnoea and fluid is certainly not decreasing. Pulse 142, and respirations 42. The chest has not been retapped in order to see if absorption would not take place spontaneously.

Thoracentesis.—To-day because of subjective discomfort, 13 oz. were withdrawn. Patient vomited once afterwards, but obviously felt relief.

There has been noticeable wasting and increasing pallor. The liver is still well below the costal margin. After tapping, the right-sided cardiac dulness is at the right costal margin. Some sub-sternal heaving and marked epigastric pulsation persist.

May the 12th : Little, if any, increase in fluid, and the temperature is coming down. The percussion-note is flat to the angle of the scapula, and dull above that level.

May the 17th : Patient seems definitely improved. Breath-sounds are heard now over the entire left lung, though accompanied nearly everywhere by fine crepitations on deep inspiration. No friction rub heard. The percussion-note is impaired over the left upper back and is still flat over the lower back and axilla. Cardiac pulsation is strongest in the epigastrium and under the sternum. The first sound is weak and no distinct apex beat can be felt.

May the 20th : Liver remains about 4 cm. below the costal margin. Cardiac apex beat is demonstrable to-day 1 cm. inside nipple line. There is still epigastric and sub-sternal pulsation, but none to right of the sternum. The percussion-note remains impaired and breath-sounds are diminished over most of the left lung, but nowhere is there a flat note, and the crepitations are disappearing.

May the 23rd : Patient is very thin, but is improving in general condition steadily. The temperature continues to range between 99° and 100° F. Impairment of left lung persists, but there is no flat note. Tubular breath-sounds and crepitations have disappeared. Sent to convalescent home.

February the 8th, 1918 (nine months later) : A pale, seedy-looking child. Under-nourished. Skin a little clammy. He goes to school, but is always tired, sits about, and will not play. As when in the ward he is optimistic about himself and will make no complaint. He has been followed in the out-patient department, but does not improve.

Abdomen.—Scaphoid and soft. No masses felt. Liver about 2 cm. below costal margin.

Heart.—Pulse 92, soft and low tension in type. Apex beat in the nipple line. There is some fluttering præcordial pulsation. First sound not strong and second rather exaggerated at the apex. A soft systolic murmur not transmitted to the axilla, is still present. This is best heard at the apex and over the præcordium. There is no epigastric nor substernal pulsation.

Lungs.—No marked submanubrial dulness. Voice-sounds are heard with tubular quality along the spine to the sixth dorsal vertebra (D'Espine's sign). The breath-sounds to the right of the spine are also very tubular, and there is less striking, but definite tubular prolongation of expiration at the right apex with a few crepitations at the end of inspiration.

Definite impairment at the left base and diminution in breath-sounds. No tubular quality and no crepitations. A few rough bronchial sounds on both sides of the sternum.

Diagnosis.—Thickened pleura on left, bronchial glands, probably tuberculous. The right apical signs often present with bronchial glands make one hesitate to diagnose an apical tuberculosis.

Discussion.—The type of pleural effusion, the afternoon rise in temperature, and the condition of the chest nine months later leave little doubt that the child had a tuberculous pleurisy, and now has at least tuberculosis of the bronchial glands. It may be freely admitted that there is here no proof of any ætiological relation between the erythema nodosum and the tuberculosis. Various affections have followed or been associated with typical cases of erythema nodosum. For example, Sir Thomas Barlow described an instance of acute thyroiditis; Brien, a case of gonorrhœa; Janson gave a summary of the published cases associated with secondary lues; Orillard and Sabourand reported a patient with streptococcal septicæmia, complicated by this condition; Joynt found 9 cases in 300 of measles, and so one might continue.

Bacteriological studies have been equally inconsistent. Sheffield Neave (1912) found a streptococcus in the blood in his patient, a child aged 4 years, suffering from acute rheumatic fever and carditis, as well as pleural effusion. Obviously, the demonstration of a streptococcus in the blood of such a patient, would be no proof that the organism had any relation to the erythema nodosum. Rosenow (1915) isolated a Gram-positive diphtheroid bacillus from the nodules, blood, and in some instances from the throats of typical cases. He even produced in guinea-pigs by injections of cultures of

his organism, nodules which he considered identical with those in human beings.

No large number of inoculations of nodule substance into guinea-pigs have been made, and most of those attempted have been unsatisfactory in that the animals died before lesions like tuberculosis could have had time to develop.

In Great Britain the rheumatic interpretation of erythema nodosum seems still the most prevalent. By reading the notes of a series of cases like Stephen Mackenzie's, I am not convinced that the sore throat and joint pains were signs of rheumatic fever, nor that there was carditis present. Histories, for instance, of cases of infection with the influenza bacillus, would as often mention sore throat, pains in the joints, and very much the same cardiac signs. In the past two years I have seen fifteen cases of erythema nodosum, in none of which were there any signs of acute rheumatism or carditis, and none had any history of previous attacks of rheumatism. Not infrequently there was present some cardiac dilatation accompanied by a soft systolic murmur at the apex, both of which disappeared during convalescence.

In 1905 Lendon, under the title "Nodal Fever," published 63 cases of erythema nodosum. He believed that he was dealing with a definite clinical entity of mildly infectious type. He emphasised the prodromal, eruptive, and convalescent stages of the disease. It is of interest that, though there were prodromal symptoms, such as sore throat and malaise, in the majority of cases, phlyctenular conjunctivitis was the only prodromal sign, which he regarded as pathognomonic. "Pseudo-rheumatism" was present in 16 of 44 private cases during the eruptive period. Subsequent rheumatism was present only once, and then in an elderly individual. Lendon also inquired into the tuberculous history because he thought that it would be as easy to prove the condition tuberculosis as rheumatism. Of 16 families in which one or more instances of erythema nodosum had occurred, tuberculosis was present in 5, and, strangely, as he remarked, the only two deaths in his series up to the time of publication had been from pulmonary tuberculosis. Lendon found four instances of a second attack in the same individual. Though he was unable to convey the disease from an ill to a healthy person, he records the development of the condition in several individuals who had accidental contact with a previous case.

Crosse, in 1908, quoting Comby, expresses very much the same view as Lendon, viz. that erythema nodosum is a specific infectious disease, an eruptive fever, analogous to the eruptive fevers of childhood.

Gosse, in an analysis of 100 cases at St. Mary's Hospital, London, found no association between rheumatism and erythema nodosum. The incidence of a rheumatic history was about the same as had been reported for London children over seven years of age. He found that the seasonal and sex variations also differed from those of rheumatism. No fibrous nodules were noted in any of these cases. In no instance did the pyrexia yield to salicylates, though pushed sometimes beyond the physiological limit. He, too, regarded the painful joints, myocarditis (?), anæmia, and tonsillitis as a part of a specific symptom-complex. He also stated: "There is no need to consider the proposed relation between erythema nodosum and tuberculosis, the evidence is based upon the von Pirquet test, and is, therefore, of little value. Moreover, in this series of seventy-five (hospital) cases, the lungs were stated to be normal in every case but one."

As early as 1876 Uffelmann described instances of the clinical association of erythema nodosum with tuberculosis.

In 1902 Poncet showed, at the Académie de Médecine, Paris, a case of erythema nodosum which he considered of tuberculous origin. Three years later his views were elaborated by Pons, with the report of the presence of giant cells in sections of a nodule, and also the development of typical nodules in an individual after a diagnostic dose of tuberculin.

Hildebrandt produced generalised tuberculosis in a guinea-pig by injecting blood from a patient suffering from erythema nodosum. As this patient, however, was suffering from chronic tuberculosis, one cannot consider this result of value. There is not the same objection to a similar result by Brien. He injected blood from a clinically non-tuberculous patient into three guinea-pigs, and all developed tuberculosis.

In 1907 Landouzy published an instance of tuberculous septicæmia complicated by erythema nodosum, and in 1913 a case of the latter, associated with joint pains and clinical endocarditis. Sections of a nodule from the second case were made, and also a portion injected into a guinea-pig. In one section in the lumen of a vessel was found a single acid-fast bacillus of typical morphology, and the guinea-pig developed a tuberculous nodule at the seat of inoculation, with tubercles in the lungs and liver. Landouzy concluded that erythema nodosum may be the result of a septicæmia with the tubercle bacillus, yet he does not contend that tuberculosis is the only cause. He compares this condition with idiopathic pleurisy, which is usually, though not universally, of tuberculous origin.

Meare and Goodridge reported recurring erythema nodosum and a swinging temperature in a patient without demonstrable tuberculosis at the first examination, but who died three weeks later of a fairly generalised tuberculosis.

Symes, in twenty cases of erythema nodosum, found definite clinical evidence of tuberculosis in six. In the microscopical examination of a nodule from one of his cases, Carey Coombs found typical giant cells; in another, the picture was that of rheumatism with endocarditis, but at post-mortem examination the condition was found to be tuberculosis. Symes, however, did not favour the theory of exclusive tuberculous origin, but rather, with Lendon, considered it "a distinct clinical entity, a specific, infective fever"; but under the same name, he thought, had been included other rashes—some rheumatic, some erythema multiforme, some tuberculous.

Whyte, in reporting a case with a *freely movable* nodule above one elbow, which he regarded as a true rheumatic, fibrous nodule developing in erythema nodosum, incidentally mentions a severe phlyctenular conjunctivitis, and a swinging temperature which did not yield to salicylates.

Moore, in a letter to the 'Lancet' on "Tuberculosis in Dublin," quite incidentally mentions the presence of tubercle bacilli in the sputum of a young man admitted for erythema nodosum.

A considerable number of French writers have recorded series of cases of the association of the two conditions. Some of these statistics need to be studied critically in regard to the grounds on which a diagnosis of tuberculosis was made. Occasionally slight impairment of the percussion-note and prolonged expiration at the right apex have been the only basis for the diagnosis, except the positive tuberculin test.

The reaction to tuberculin in erythema nodosum has caused considerable controversy. In the literature are found all degrees of belief in its value, from Gosse's disregard of it, as quoted above, to Poncet's assurance that he produced an attack of erythema nodosum by one diagnostic injection. In France the intradermal method of Mantoux is most frequently used, while in England and Germany the von Pirquet cutaneous test is usual. However applied, there is general agreement that the tuberculin test is nearly always positive, and often violently so. Pollak, in 1912, obtained 100 per cent. positive reactions in 48 cases, 58·3 per cent. of whom were under six years of age. Moro, by his method, had 4 negative cases out of 30. There can be no doubt that in children, on whom in many hospitals a routine von Pirquet test is done, the marked reaction in practically

all cases of erythema nodosum is in striking contrast to the many negative reactions which one obtains, even over six years of age, in other diseases. The von Pirquet test in the present case was repeated, with a positive result after the nodules had disappeared. I have found this true in the only four instances of apparently non-tuberculous children, in whom I have had opportunity to repeat the test after complete recovery from erythema nodosum. These four cases, however, were all over seven years of age.

In 1909 rather a heated controversy on the intradermal tuberculin reaction took place in France. Chauffard and Troisier produced nodules which they considered identical with erythema nodosum by this method. Their results were confirmed by Laignel-Lavastine. Soon afterwards, Thibierge and Gastinel produced lesions resembling those of erythema multiforme by the intradermal injection of tuberculin in that condition. They obtained somewhat similar results by the injection of diphtheria and tetanus antitoxins and saline solution. The lesion resulting even represented the same stage as the eruption showed elsewhere on the body. In erythema nodosum they confirmed Chauffard's and Troisier's findings in regard to tuberculin, but added that similar nodules, though less indurated, could be produced by diphtheria and tetanus antitoxins. They concluded that in erythematous dermatoses an intradermal injection of tuberculin, and, to a less extent, of diphtheria and tetanus antitoxin, and even of normal saline, tended to reproduce the type of erythema then present. Barbier and Lian confirmed the results of Chauffard and Troisier in cases of erythema multiforme, but found that only tuberculin produced the nodule in erythema nodosum.

In a case of erythema nodosum, under Dr. G. A. Sutherland, in 1912, a most violent local reaction followed the von Pirquet cutaneous test, but there was no reaction whatsoever to streptococcal and staphylococcal vaccines, applied by a similar method.

SUMMARY.

A case of acute pleural effusion in a boy, aged 9 years, suffering from erythema nodosum, is recorded. The occurrence of erythema nodosum as a clinical entity, and its association with various diseases, especially tuberculosis, are discussed, with a *résumé* of the work on the significance of the tuberculin test in this condition.

CONCLUSIONS.

(1) The supposed relationship of erythema nodosum to acute rheumatism lacks clinical support. The joint pains which are frequently present in erythema nodosum do not respond to anti-rheumatic treatment, and the joints bear no resemblance to those in rheumatic fever. Carditis does not form a part of the erythema nodosum picture.

(2) That erythema nodosum may be a specific disease of a mildly infectious type, is supported by a fairly well-defined prodromal stage, often with sore throat, an eruptive stage, and a slow convalescent period. Against the specific fever theory is the fact that the cases are usually isolated, and only rarely has a contact developed the disease.

(3) Since erythema nodosum occurs in a variety of conditions, the possibility that it is a non-specific cutaneous manifestation of general toxæmia must be considered. To disprove this supposition is the fact that in the majority of cases no other illness is detected.

(4) In favour of the tuberculous ætiology is the strong reaction to tuberculin, and the clinical association of the two conditions. Against it, is the comparative rarity of such association in hospital practice.

(5) The ætiology of erythema nodosum has not yet been established.

I wish to thank Dr. G. A. Sutherland for the kind permission to publish my notes on this case.

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ON THE NATURE OF VON JAKSCH'S DISEASE.

By GORDON WARD, M.D.

MANY names have been attached to the morbid process first described by von Jaksch, but of these only two are of immediate interest to us, viz. Pseudo-leukæmia infectiva and Splenic Anæmia of Infancy.

Amidst a sea of confusing literature these two terms stand out as the lighthouses to which writers who could find no other guidance look for deliverance. To some, one or other of these terms has proved an acceptable refuge, to others they have provided but

brief solace, while to not a few they have seemed only to make the confusion worse.

The writer proposes to suggest a new term and a conception of the disease for which it is claimed that (1) it harmonises all the chief anomalies recorded from time to time, (2) provides a definite standard by which cases may be judged, and (3) explains the post-mortem findings and the blood-picture. As to ætiology, the writer has no suggestion beyond that implied by the term "infectiva," which he believes to be essentially correct. This paper is not founded on this or that case (indeed, war service prevents access to case records or literature), but on a general study of the literature of this and other blood diseases and on certain views to which this has given rise.

A DESCRIPTION OF THE DISEASE.

It will be well to collect first the symptoms, etc., which are generally admitted to be present in the average case of this disease when it is well developed.

It is a disease of infants and is usually manifested about the end of the first year and a half of life. It is not hereditary or congenital, but has been rather frequently noted in twins. It is very often, some say invariably, associated with rickets and so also with various catarrhal troubles, particularly those of the intestinal tract. The onset is insidious and early stages can hardly be identified, nor is there apparent any hard and fast line between what one might regard as a natural degree of anæmia in a rickety child and the fully-developed syndrome. The predominant symptoms are enlargement of the spleen, which is hard and "massive," wasting, and anæmia. The liver often seems enlarged, but enlargement of this organ being difficult to evaluate in a very thin child no great stress has usually been placed on this fact. Slight enlargement of glands may also be noticed, but this, again, is not uncommon in a sick child and has not gained a definite place in the symptomatology. To these are added signs of rickets. The blood-picture is notable for a diminution of red cells, which is not often below one-half, and an increase of white cells seldom extreme. Amongst both kinds of cells abnormalities are common—amongst the red cells megaloblasts and normoblasts with poikilocytosis, polychromasia, etc., and amongst the white myelocytes and cells which appear to belong to the more remote ancestors of the ordinary white cells and may be classed as myeloblasts.

The disease is resistant to all specific treatments, but is often recovered from if associated infective conditions are thoroughly taken in hand and eradicated. Otherwise, it progresses to a fatal termination which is commonly brought about by pneumonia or sheer inanition.

There is very little tendency to hæmorrhages, no jaundice, or increased fragility of red cells, and no tendency to cirrhosis of the liver or to any other undesirable sequelæ in cases which recover. It has been treated by splenectomy without fatal results and even with benefit, but it is possible that some at least of the cases so treated were in reality cases of acholuric jaundice or cholæmia.

At autopsy the picture is constant. The spleen, glands, and liver are affected, and microscopically are found to present foci of cells which are not to be distinguished from those of the marrow. These foci appear to be actively forming red and white cells both normal and such as are found as abnormalities in the blood, but the latter especially. Accurate reports on the histology of the bone-marrow are very few. In the liver these foci are found in the areas normally occupied by the fibrous tissue of Glisson's capsule. In the spleen they occupy the pulp and sinuses, in the glands the sinuses. How far the normal lymphatic centres of these latter organs are involved it is almost impossible to say until histological methods are improved. In none of these organs is there any fibrosis of pathological degree. The spleen presents neither the almost negative findings of cholæmia nor the fibrosis of Banti's disease. On the other hand, all these findings are identical in nature and in distribution of lesions with myelæmia (spleno-medullary leukæmia) as we meet with it in adults. They are not identical in extent, and the definite clinical differences prevent our claiming von Jaksch's disease as merely a variety of the adult disease, modified, perhaps, by its happening to occur in a child. Moreover, the adult disease does at times occur in childhood, but is then amenable to arsenic and yet ultimately fatal and is not associated with rickets, or evident infective processes.

THE WRITER'S HYPOTHESIS.

It is obvious from the above that we are dealing with a hyperplastic process in the lymphatic tissues similar in essentials to that seen in leukæmia, but, as it were, on a lower plane. It gives rise to blood changes, indeed, but not to the huge leucocytosis of leukæmia—yet the abnormal cells found, although in small numbers, are identical

with those of the latter condition. In accordance with myelæmia, too, is the domination of the clinical picture by the splenomegaly, the apparently secondary significance of the enlarged liver and glands, which are, nevertheless, found affected at autopsy or even during life if carefully noted. The little liability to hæmorrhage strengthens the parallel, as does the chronic course.

Very markedly different, however, are the curability of von Jaksch's disease and the association with rickets and infective processes.

As the disease improves *pari passu* with the infective processes we may propound the hypothesis that in infants with rickets there is a peculiar liability for the response to chronic infections to assume the characters of a leukæmia rather than the more usual leucocytosis. In saying so we must always keep in mind that it is the tissue changes of leukæmia which are of importance, and not their variable reflection in the circulating blood.

Since the process is curable and depends with great certainty on an infection, we may call it a secondary or symptomatic leukæmia to distinguish it from the idiopathic and fatal forms of leukæmia, which would then be called primary. Nor does it stand alone in this secondary class, for there are now on record a great number of cases in which what has seemed to be something very closely allied to primary leukæmia has been present, depending on infection from the tonsils, from boils, or from some other source, such as a septic wound. This has disappeared, however, after puzzling the best physicians, when the septic focus has been properly treated. These have mostly, but not entirely, been cases of secondary lymphæmia (lymphatic leukæmia). Secondary myelæmia has most often been noted in cases of cancer with metastases in the bone-marrow.

It is seen then that the original description of the disease as a pseudo-leukæmia was almost accurate. It is inaccurate in that "pseudo-" means just what each individual may care to read into it; but the term did not apparently contemplate the relationship to leukæmia set forth above. Unfortunately the term has since then been used to cover quite dissimilar cases, *e. g.* cases of Hodgkin's disease and cases of true primary leukæmia in which there did not happen at the moment of observation to be a prominent leucocytosis. It cannot, therefore, be retained without risk of continuing confusion. The term "infectiva" would appear to be fully justified. The term "Splenic Anæmia of Infancy" seems to the writer to be suitable in so far as it connotes a well-recognised condition without implying any particular view as to its ætiology or nature, but to be

entirely unsuitable in that it covers, or can be made to cover, other conditions more usual at a later age, but which may chance to occur in infancy at times. It is probably best to retain for the present the quite non-committal term "von Jaksch's disease," which has the additional advantage of rendering due recognition to the earliest and most accurate describer of the syndrome.

Should the writer's views prove acceptable, the proper term would be "secondary infective myelæmia of infancy," or possibly "rachitic myelæmia"—for there can be little doubt that rickets has a great part in ætiology, either by predisposing the hæmatopoietic system to the particular type of reaction or merely as rendering the subject more liable to all sorts of infections.

Before attempting to justify the claims made in the early part of this paper it may be well to consider whether the syndrome we are considering may properly be classed as an independent disease. The writer's view is simply this, viz. that it is as much and as little an independent disease as is pneumonia. As pneumonia is the reaction of the lungs to one of various organisms, so is von Jaksch's disease the reaction of the blood-forming tissues to an organism, probably also to one of several organisms, all of which can produce the disease in a favourable soil. It is one of those progressive morbid processes which are sometimes termed symptoms, sometimes diseases. So also pupura is sometimes regarded as merely a symptom and sometimes, there then being no obvious ætiological factor, elevated to the rank of a disease. It is a matter of which every physician must judge for him or herself, nor does the conclusion to which each may come in any way affect the theory here set forth or the facts with which it deals.

APPLICATION OF THE HYPOTHESIS.

Amongst the acknowledged features of the disease set forth above some are not elucidated by the writer's views, while others are rendered more easily explicable. They may well be taken in turn.

Age incidence.—This seems to depend largely on the unknown factors which determine the incidence of rickets at the same age. It is also worth noting, as in part perhaps explaining, why the reaction should take the particular form seen in von Jaksch's disease that this form is essentially unspecialised and embryonic. It does not seem unnatural that an embryonic form of reaction should occur most readily in those but little removed from embryonic

life, even if they have already moved a short way along the road to adult specialisation of the blood-forming organs.

Family incidence.—That the disease should be congenital or hereditary is not to be expected on any hypothesis. That it should occur rather often in twins may be due to either factor in the aetiology. Twins are apt to suffer from defective nourishment and from rickets, and if one twin should contract an infection, the other would be most likely to get it also. That the response in the two should be the same is quite what one would expect.

Association with rickets.—This appears to be constant, and those cases in which it was not noted were probably cases of some other disease, and will be dealt with later. It may be noted that on the theory of a secondary infective leukæmia we really need some such factor as rickets to explain why anything more than the normal leucocytosis should have occurred. It may be remembered that a disordered growth of young bone is also characteristic of rickets, so that we have even an apparently parallel effect on another tissue to put in evidence. That rickets predisposes to infections is well realised, and the writer has already stated that this is, perhaps, the only share it has in the disease. But the theory of a direct predisposing influence is certainly more satisfying and more attractive, and is not unreservedly accepted here because it rests only on probability, and is a matter of which we cannot at present have direct proof.

Insidious onset and ill-marked early stages.—It is apparent that if we are dealing with nothing more than a slowly developing reaction of the blood-forming tissues to an infection, that reaction will not be recognised until it is well marked. Clinically, there are two chief and readily appreciated signs of the reaction, viz. the splenomegaly and the blood changes. Both of these are progressive in nature, and have small beginnings little liable to attract attention. Moreover, splenomegaly at least may be due to other causes, and so not have great weight attached to it by the clinician until it is more or less extreme. Again, it may be that the infection is controlled by treatment almost before the reaction is established, or when it is still in early stages. We shall then be faced with a case which will appear as one of rickets, with few other changes of consequence, but just enough on careful examination to seem to justify the statement that von Jaksch did not describe a disease which is entitled to be called a clinical entity. On the other hand, when the spleen is very large and the blood changes well marked, especially if the case be first seen at this time, it may be that the rickets will appear to

occupy a subsidiary position and von Jaksch's disease the place of primary importance. This difficulty has evidently been felt by physicians, and papers have been written (the writer regrets his present inability to give due credit to the writers) to show that there was no hard and fast line between rickets with anæmia and von Jaksch's syndrome. Other authors have described a series of well-marked cases, and come to quite the opposite conclusion.

The writer claims that on the hypothesis of a secondary infective leukæmia all these difficulties disappear. The process is essentially the same whether it is ill or well marked.

Splenomegaly and anæmia.—From experience of adult cases of primary leukæmia, and also of some of the secondary cases dependent on cancer with bone metastases or on sepsis, we know that the spleen does seem to dominate the clinical picture in chronic myelæmia. We know also that anæmia is always associated—and this is perhaps due to impairment of normal red-cell formation by the increased output of white cells, or perhaps to the actual involvement of the red cell forming centres in the morbid process. The latter appears most probable in von Jaksch's disease, for the red cells are not only diminished but also very abnormal in form and nature. The conception of a secondary infective leukæmia fits in well with these facts.

Enlargement of liver.—We have seen that at autopsy this is found to be due to the presence in Glisson's capsule of foci of white cell formation. The disposition of these foci is seen in no other disease except leukæmia, and would of itself almost justify the hypothesis set forth.

Enlargement of glands.—This is not well marked, as also it is ill marked in the myelæmia of adults. As a matter of fact it is commonly much more evident in just those glands which are least accessible to clinical examination, viz. the mediastinal and mesenteric. That these things should be so (and they can be verified by all), is further evidence of the very close relationship to adult myelæmia.

Blood changes.—These have always been felt to be anomalous and difficult to explain. All the difficulties disappear if they are looked upon as manifestations of a low grade leukæmia, *i. e.* a leukæmia in which the formative functions of the marrow, spleen, etc., are at a far lower level of hyper-activity than is the case in the primary leukæmias, and in which the output of abnormal cells is consequently less and the interference with the output of normal cells also less.

Resistance to specific treatments.—Many treatments have been

used for von Jaksch's disease, *e.g.* administration of arsenic in increasing doses; X-rays; splenectomy; salvarsan, etc. None of these has achieved notable success unless accompanied by treatment directed to the infections and rickets. In adult leukæmia, on the other hand, the use of arsenic and X rays can be depended upon to produce at least one remission in the great majority of cases. Here we have a difference between the two which may be susceptible of more than one explanation. Thus the causes of the two diseases are different, and it may be that arsenic affects the cause directly in leukæmia and not the leukæmic process to which the cause gives rise. In such case we should have no warrant for expecting the efficiency of arsenic in a secondary leukæmia due to other causes. Or it may be that the non-curative but striking effect of arsenic in adult primary leukæmia is really exercised to some degree in secondary leukæmia also (there are cases which seem to warrant some such assumption), but that owing to the lesser degree of reaction in the latter, the result is also less obvious. For we must remember that the cure of the secondary leukæmia alone would not necessarily or even probably effect the cure also of the rickets or infections. However this may be, it is seen that the different response to treatment does not in the circumstances tell against the essential unity of the two conditions.

A FINAL DIFFICULTY.

The final difficulty in the acceptance of any theory of this or any other disease is the unfortunate relationship which pathology has come to hold to medicine. Neither party seems to be accustomed to think pathologically. The pathologist whose sphere should surely be all morbid physiology has come to specialise in morbid anatomy and bacteriology—each a very small division of the study of disease processes in man. The physician, on the other hand, seldom takes the trouble to study the process beneath his eyes, seeing only one diseased condition instead of the steady progression of a perverted physiology. Should the pathologist, who has probably never seen the case, send a definite opinion on some minute particle of tissue or excrement, the physician seems to find his whole needs fully satisfied by the acquisition of a more or less appropriate label.

If we are to understand von Jaksch's disease these attitudes must be abandoned. In the first place, it is necessary to envisage fully the position that leukæmia is not merely or chiefly a condition found in the blood by the pathologist, but primarily a tissue change.

This tissue change may even for a great part of its course lack any reflection in the blood at all, and until we understand something of the mechanism whereby blood-cells are shed off into the blood-stream, we are hardly entitled to be surprised thereat.

This tissue change is apparently different only in degree from one sort of defence reaction of the tissues, viz. "small round-celled infiltration," such as is met with in many conditions, and which is not an infiltration at all, but a local reaction.

Between primary leukæmia and small round-celled infiltration there are many grades of reaction, and to some of these the name secondary leukæmia seems not inappropriate. Of the latter, von Jaksch's disease is one form—the liver lesions would commonly be described as small, round-celled infiltration, the spleen lesions are typical of leukæmia.

OTHER SOMEWHAT SIMILAR DISEASES.

With regard to other diseases reported under this head, one can only say that the disease described here is a definite morbid process, and cases that do not conform to any stage of it are not von Jaksch's disease. The combination of a large spleen and anæmia—and these are practically the only abnormalities which are obvious to the clinician—does not justify the diagnosis except when it occurs in infancy and in association with rickets and infections. To describe such cases in older children, and more or less obviously dependent on syphilis, and from this to argue that von Jaksch's disease is due to syphilis, is science gone mad. Yet this has not infrequently been done. We can only hope to elucidate the nature of von Jaksch's disease by determining as accurately as possible to what morbid condition that term should apply; not by collecting together a number of dissimilar conditions (as has recently been done), and seeking to cover them with the one name. The morbid process here described certainly exists, and if it is not von Jaksch's disease, then it is a disease hitherto unknown in medical literature, which, in view of its frequent occurrence, seems unlikely.

THE HYPOTHESIS RE-STATED.

The writer's view of von Jaksch's disease is then as follows: The disease is a reaction of the infantile blood-forming organs to infection. The actual infecting organism is not known, and is not necessarily specific. The particular reaction is only produced when rickets is

present, and it is probable that the conditions present in rickets are in some way responsible for the reaction taking the form which it does. There are, therefore, two essential aetiological factors of which neither alone would prove sufficient, viz. infections as an exciting factor and rickets as a predisposing factor.

The reaction itself is similar in nature to that seen under the influence of the unknown cause of the disease known as myelæmia or spleno-medullary leukæmia. Similar reactions of lesser intensity than in primary leukæmia have been noted in cases of sepsis and of cancer with bone metastases. In some at least of these the spleen has been enlarged and myeloid and the liver and glands similarly affected. All of them differ from primary leukæmia, not in nature but in extent and curability.

It is suggested that they may well be called secondary or symptomatic leukæmias, and von Jaksch's disease would then take the descriptive name of secondary infective myelæmia of infancy or rachitic myelæmia. It is not urged that these names, although accurate from a descriptive point of view, should forthwith replace the term von Jaksch's disease.

NOTES ON SMALLPOX IN CHILDHOOD.

By H. W. L. BARLOW, M.D.,

Senior Assistant Medical Officer, Joyce Green Hospital, Dartford.

THE recent small outbreak of smallpox in the East End of London has been largely an affection of children: of the first thirty patients admitted to hospital fourteen were under fifteen years of age, ten being under ten years, and two infants. The following brief account, though necessarily incomplete, may be of some interest.

A sailor, returning home from a Spanish port, was in bed for two days with a "cold," "came out in pimples" about the third day, and then, feeling better, got up and signed on for another boat. He left by this boat about the eighth day, the "pimples" remaining for some days after he was on board. On the day of his departure, a child, A, 6·5—(the letters refer to different families, the figures to the age in years)—returned from her grandmother's to the house he was staying at. Eight days afterwards she was taken ill with vomiting and pains in the back, went to a hospital, was given a powder, and told to come again if there was a rash. A rash did

appear on the following day, but as the weather was cold, a doctor was called instead. He thought it measles. On the third day another rash appeared, thought by the neighbours to be chicken-pox. This was very copious, and on the ninth day the child died. An unvaccinated brother, aged 4 months, subsequently developed smallpox. Three families, B, C, and D, numbering eighteen persons in all, were intimate with A, and twelve of them, three adults and nine children, were subsequently attacked. The three adults were the mothers, women of thirty-seven or thirty-eight, who had not been vaccinated since infancy; the nine children were first vaccinated during the incubation period, as contacts. Of the six children remaining unattacked, four, according to the mothers' statements, had been vaccinated prior to exposure; the other two, not.

The outbreak made further progress with the peculiar erratic certainty characteristic of smallpox. Part of A's clothes went to a laundry and infected a sorter there; some were starched by another woman and gave rise to two cases among her children. Two friends of the D family, the undertaker who buried the dead child, and subsequently his wife and daughter, all developed smallpox. Finally, a carpenter unconnected with any of them, who appears to have been accidentally included in the funeral party, on his way to work close by, was attacked, and so, later, was his wife. In other cases no apparent connection could be traced.

Except the one mentioned, none of these attacks proved fatal; nearly all those admitted to hospital were discrete cases and some very mild: the combination of a considerable degree of infectivity with rather low virulence seems to have been a feature of the outbreak.

Of the total of fourteen children under fifteen years of age, if we consider first five who were never vaccinated at all or only after the commencement of the actual illness, we find, as is customary, that the amount of eruption was perhaps rather smaller than in corresponding adults. Two of them, D, 14, and F, 6, had somewhat severe discrete attacks followed by much scarring of the face, hands, etc. The distribution was normal in the first; in the second younger child there was some attraction of the rash to the buttocks and thighs at the expense of the feet. In two others, X, 13, and Z, 10, the eruption was scanty; it was distributed normally in the first, but more uniformly than usual in the second. The remaining case was a baby, aged 4 months, brother to the child who died; the pocks were fairly numerous on the buttocks and backs of thighs, and there were a few about the elbows, but scarcely any on the

hands, feet, or trunk, and practically none on the face. It will thus be seen that the distribution, as a rule, followed that prevailing in the adult (face, back, and extremities most affected, abdomen less), with some few exceptions, due to infantile conditions of skin irritation. The duration of the initial illness appears to have been normal; information is wanting as to the symptoms, but apparently they were slight. In hospital the secondary fever was also slight, and the constitutional disturbance hardly exceeded that in chickenpox with a rash of equal extent. Some had a little conjunctivitis and one a small phlyctenule, but the mucous membranes, as a rule, escaped. Individual lesions presented the usual features; in one or two cases there was sensible modification, but then only to a small extent; it was perhaps better marked in some of the other vaccinated children.

The nine children not hitherto spoken of, were vaccinated for the first time in the incubation period, about a week before the appearance of the smallpox rash, and apparently with success. According to the statements made, the interval between the two events varied from six to eleven days, but was most commonly seven or eight; in one case it could not be ascertained. All these cases, except two, had very mild attacks; these two, W, 4, and D, 7, were discrete cases with the usual distribution, except that there was some tendency for the hands and feet to escape their due proportion of rash. In another child, B, 8, whose rash was moderately dense on parts of the body, the face was but lightly attacked. In the six others, though no actual count was made, it is probable that the number of pocks was under fifty altogether, and in three of them under a score. C, 13, had previously suffered from a species of bullous impetigo which had left deeper scars than did the smallpox. C, 2, had most of the rash on the thighs and forearms, the face and scalp being practically free. E, 6, had a morbilliform prodromal rash, followed by a scanty eruption, with one pock in the left axilla. In B, 1, the scalp and face were free, and B, 5, had only one pock on the face. D, 5, had none on the hands or scalp, and practically none on the feet.

Severe confluent chickenpox with fever, slight delirium, and some œdema of the face, such as sometimes occurs,* would, superficially, present a more formidable appearance than most of these cases. But, though the diagnosis was doubtless simplified in those children where the eruption was sparse, by the fact that, as contacts they

* J. D. Rolleston, "Confluent Varicella with Secondary Fever," *BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1906, iii, p. 21.—(Ed.)

were already suspected of smallpox, a careful estimate of the relative importance of the features presented, especially the development and distribution of the lesions, would have sufficed, apart from this. It may, however, be reasonably doubted whether it would be possible in later life, from an inspection of the skin alone, to say whether some of them had had smallpox or not.

I am indebted to Dr. A. F. Cameron, Medical Superintendent of the Smallpox Hospitals of the Metropolitan Asylums Board, for permission to contribute these notes.

“CAN THE CLINICAL MANIFESTATIONS OF CONGENITAL
HEART DISEASE DISAPPEAR WITH THE GENERAL
GROWTH AND DEVELOPMENT OF THE PATIENT?”

By F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE only case hitherto recorded in which the clinical manifestations of congenital heart disease have disappeared during the progress of the general growth and development of the child is, as far as I know, one recently described by Dr. Herbert French (*‘Guy’s Hospital Gazette,’* London, 1918, xxxii, p. 87). The patient was a boy, the only child of a naval officer, and was fourteen months old when Dr. French first examined him. At that time there was a very loud systolic murmur, “with its maximum intensity over the fourth left intercostal space, close to the sternum, but audible also over the whole precordial region, and, indeed, over most of the chest, both back and front.” Dr. French adds that it was accompanied by a thrill, near the sternum, and that he and others made the diagnosis that there was a congenital aperture in the interventricular septum. When the boy was two years old, the murmur was about the same as before, very loud and universal; but when he was five years old, there was absolutely no murmur to be heard. At the age of ten years there was no objective evidence of the presence of any heart lesion at all, and ultimately, to the father’s great delight, the boy was passed as eligible for the Royal Navy.

It seems to me that this case, rare as it may be, is one of great importance in regard to the question of prognosis. We may remember what happens occasionally to certain congenital lesions in other parts of the body. Thus, we know that in some cases

congenital vascular nævi of the skin spontaneously diminish, or even disappear altogether, with the general growth of the child. Moreover, as Dr. French points out, a lesion in a baby, such as a defect in the interventricular septum, may be considerable in regard to the small size of the whole organ and the whole body; but if, during the progress of the child's general growth, the defect or lesion does not enlarge in proportion to the enlargement of the whole organ and the whole body, it may ultimately become so relatively small as to be negligible and give rise to no abnormal physical signs or symptoms whatever. I should like to add that occasionally unusual apertures in the interventricular septum occur which are surrounded by much fibrous or cicatricial tissue; and it is just conceivable that the contraction of such tissue might, in similar rare cases, lead ultimately to great diminution, or even complete closure, of the aperture.

Though Dr. French's remarkable case is the only one of the kind which I have as yet come across in the literature of the subject, I am able to say decidedly that it does not really stand alone and without confirmation. Some years ago a foreign medical *confrère* gave me an almost identical history in regard to a boy who was a relative of his by marriage. The boy used always to be cyanotic, and had a tremendous thrill or *frémissement cataire* of Laennec (*fremitus felinus*) over the heart, together with a murmur which could be heard with the ear at a slight distance from the chest. However, in other respects, that is to say, in regard to general condition, his development was good, and he became rather unusually strong. He could wrestle well, and used to go for long walks in the hills without becoming over-fatigued. Ultimately, he was examined for military service, and was passed as quite fit, the examining doctor "finding nothing wrong with him."

POSTSCRIPT (May 16th, 1918).

Since writing the above note I have seen a letter by Dr. Louis Stamm, in the 'Guy's Hospital Gazette' (1918, xxxii, p. 146), referring to two cases in which a congenital cardiac murmur completely vanished. Both cases were in boys. One was seen in consultation with Sir James Goodhart, and the murmur became less and less audible, and by the time the boy was six years of age it was altogether absent. The other had been under Sir James Goodhart's observation, who stated that the murmur completely disappeared as the boy grew up.

A NOTE ON ERYTHEMA IRIS.

By F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE patient, F. F—, a boy, aged 6 years, is the only child of apparently healthy parents. He has always been delicate, and is subject to recurrent bronchitic attacks, with a tendency to asthmatic breathing. In the early part of February, 1918, he had a sharp attack of broncho-pneumonia, the febrile portion of which lasted about nine days.

The erythema iris commenced about the middle of April, 1918,

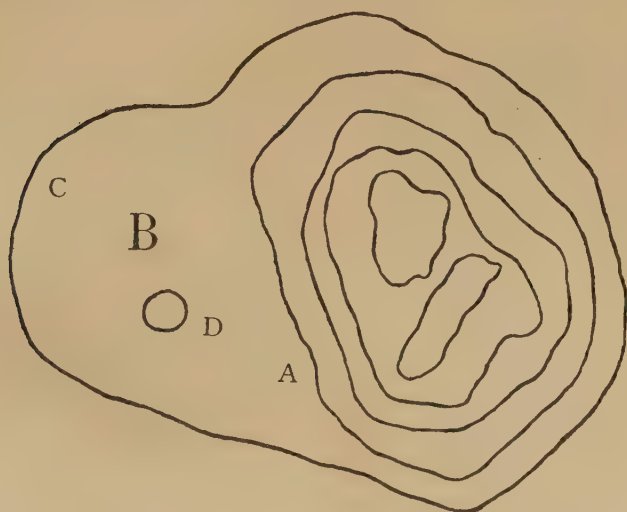


Diagram (natural size) to illustrate one of the "systems" of erythema iris.

when the boy was apparently in good health and in the absence of any obvious exciting cause. It was limited to the skin of the trunk and was not accompanied by fever, pain, itching, or any disagreeable cutaneous sensation worth mentioning; nor was there any obvious inclination to scratching. There were three patches or "systems" of the erythema iris, the largest in front of the trunk and one of smaller size on either side. Each "system" consisted of thin, somewhat irregular, circular or noose-like, erythematous lines, slightly raised above the general level of the skin, one line within another, the outside line being doubtless generally that most recently developed. In the largest of the "systems" (that in front of the trunk), at one time as many as seven distinct circles could be easily made out; later on, the inner circles gradually faded and the skin

commenced to desquamate slightly. The boy was given calcium lactate ($7\frac{1}{2}$ gr. thrice daily) and the eruption slowly disappeared in the first half of May. The accompanying diagram (see Fig.) is of one of the "systems"—that on the right side of the trunk—to illustrate the formation of a fresh (outermost) noose of erythema. The area *B* was observed one morning to show a diffuse urticaria-like blush; it was by the side of the patch ("system") of erythema iris marked *A*. One or two days later the diffuse erythema had faded and given place to a thin, looped erythematous line (*C*), which extended so as to include within it the already formed system (*A*). About ten days later a small circle of erythema (*D*) formed within the area enclosed by the loop of *C*. Then the whole "system" gradually faded away.

It may be noted that in the present case a Roentgen skiagram of the thorax shows the presence of enlarged hilus bronchial glands, but the Pirquet cuti-reaction for tuberculosis is negative.

CASE OF HÆMOPHILIA WITH EFFUSION INTO KNEE-JOINTS.*

By PAUL BERNARD ROTH, F.R.C.S.

A BOY, aged $6\frac{1}{2}$ years, was admitted to hospital on January 26th, 1918, with greatly swollen knee-joints, his mother stating he was a hæmophilic. The family history was negative. The patient is the only child. Previous to his birth his mother had one miscarriage at the fifth month, preceded by repeated grave hæmorrhages. When she has had her teeth removed there has been considerable bleeding for some days after. Of the mother's relations, two sisters are alive and well. Both are married; one has two boys, and the other a girl, all of whom are healthy. The father died at seventy of old age; he was not a bleeder. The mother died at sixty of cancer of the stomach. She had two brothers who are both alive and well, and are not bleeders.

History of case.—The patient was quite well until he was 2 years old, when he fell down and tore his upper lip at the frenum. He bled for two days, and was treated by the electric cautery. Soon after he bled from the tongue for three days. At the age of three his right knee swelled up suddenly; after some time the swelling subsided. Since then the swelling has appeared and subsided

* The case was shown at the Section for the Study of Disease in Children of the Royal Society of Medicine on February 22nd, 1918.

repeatedly, and the knee has never been quite well. He also used to bruise very easily; thus the whole of his back or the whole of one arm would become bruised. This tendency has not been noticed for some time. When 6 years old his left knee suddenly swelled up and then subsided; it has done this several times since. Only six weeks ago he started to bleed profusely from the socket of a milk molar. The hæmorrhage lasted for a week, and was always much worse at night.

On admission he was seen to be an intelligent, fresh-complexioned,

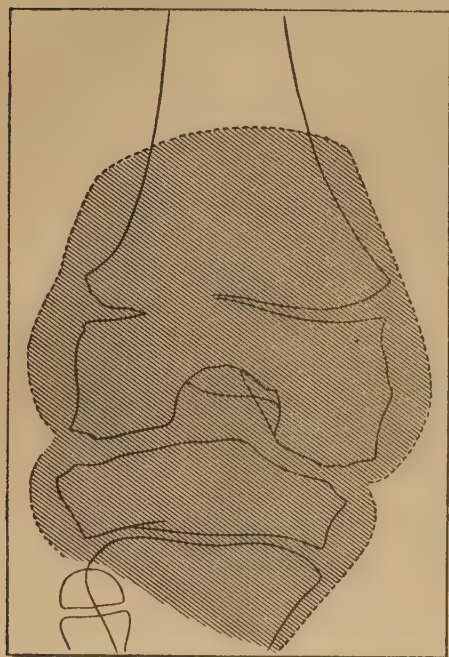


FIG. 1.

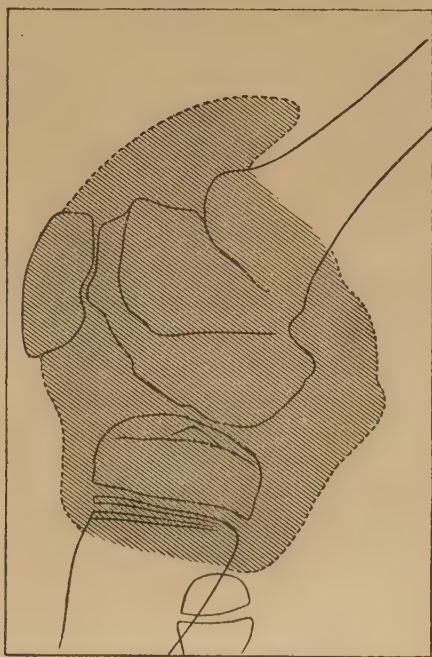


FIG. 2.

well-nourished boy, with brown hair and eyes. His tonsils were hypertrophied as large as cherries, blocking up his throat. His knees were enormously enlarged, especially the right, which was hot and glazed. A few days after admission he scratched his left index finger one afternoon, and the next morning his shirt and bed-clothes were covered with blood. The scratch bled for two days. The swelling of the left knee gradually disappeared, but that of the right has only slightly lessened.

Skiagrams of the right knee by Dr. W. Ironside Bruce show extensive wearing away and absorption of the cartilage and bone of the articular surfaces of the femur, tibia, and patella. There is also to

be noticed the formation or building up of new bone at the edges, *i. e.* lipping, and a dark shadow surrounding the bones, an appearance evidently due to distension of the synovial cavity with blood. These appearances taken together, and with the age of the patient, are unlike those in any other condition, and I suggest they are pathognomonic of hæmophilia (*vide* fig.). I believe this to be true hæmophilia in spite of the absence of a family history. I have no doubt the joint effusions are due to blood, but some writers say definitely that the effusion in these cases is not due to blood but to serum, some state that the effusion is due to mixed serum and blood, and others that in every case the effusion is blood; so that there does not appear to be any certainty on this point. In this case the skiagrams showed a marked shadow, and I do not doubt that the swelling is due to blood. The mother mentioned that several times when the child bled the bleeding was worse at night, a fact which has been noticed by all writers on hæmophilia. The family history in this case, as far as it goes, does not show anything, but presumably the boy had ancestors who did bleed unduly, or this may be the start of a new hæmophilic stock.

Another point of interest is the diagnosis. When first seen the case was what a proper examination diagnosed as a tuberculous knee, and in the literature cases are described as having been diagnosed as acute tuberculosis even by good observers, and some have even been operated on and have died. In this case the mother came with the patient and said he was a hæmophilic, and in such an event the confirmation when the idea is present is easy, but I think that if there were any difficulty the X-ray examination would clear up the doubt.

With regard to prognosis, the chief feature in this case, to my mind, is the damage to the knees, which are practically sure to become more or less ankylosed. I want to obviate this as much as possible by endeavouring to prevent other attacks of effusion into the joint by limiting the movements of the joint with splints. I shall therefore apply two "knee cages," and give regular doses of thymus gland and calcium and magnesium salts.

The only other feature in this case which calls for comment is the condition of the tonsils. His two large tonsils are seriously interfering with his breathing; they seem completely to block up the back of his throat. He has also got a very high-arched palate. But for the hæmophilia the tonsils would have been removed at once. In order to get him better we want to improve the quality of his blood, and the best way to do that is to give him a free air-passage.

So that here we have a vicious circle; we cannot remove the tonsils because of the peculiarity of his blood, and the enlarged tonsils stand in the way of efforts to improve his blood. In the literature dealing with operations on the tonsils in hæmophilic subjects I find that an American surgeon, Packard, did remove the tonsils of a known hæmophilic, and the case bled afterwards for six days. At the end of that time the bleeding was stopped by injecting 20 c.c. of rabbits' serum into the buttock. I would like to meet a laryngologist who would be willing to remove these tonsils. I think it ought to be done, but not by me.

PREGNANCY OCCURRING IN A CHILD AGED 14 YEARS

By JAMES BURNET, M.A., M.D., M.R.C.P.E.

I WAS consulted recently by the mother of a girl, aged 14 years. The mother had noticed that a fortnight before some secretion was coming from the child's breasts, which were very full. I found that menstruation, which had commenced at the age of 12, and had been quite regular ever since, had ceased four and a half months before. The girl was, in my opinion, remarkably precocious for her years, and conversed with me quite as an adult might do, and frequently interrupted her mother in discussing the case with me. On compressing the breasts a considerable quantity of thin fluid could easily be caused to flow from the nipples. There was no morning sickness, but a certain amount of anæmia was present. On examining the abdomen I found it enlarged in accord with the period which had elapsed since the last menstruation. The mother had no knowledge regarding any sexual intercourse on the part of the child, who was stated to be an apt scholar and took a great interest in her school work and was well behaved at home.

Pregnancy in such a young child is not common, and, consequently, I think the case is interesting enough to place on record. Cases have occurred at even an earlier age, and, in fact, many instances have been recorded by medical jurists of girls of 14 who have conceived and been delivered quite successfully at full time. The interest of this case for pædiatrists, however, lies in the fact that they may be consulted for a similar condition and may easily be thrown off their guard should they not suspect pregnancy as a cause of enlargement of the breasts in a young girl. In this particular instance the precocity of the child made me suspicious even before I made any examination of the patient, consequently there

was little or no difficulty in forming an opinion as to the real nature of the case with which I had to deal.

Since writing the above I have received a letter from the mother of this patient, stating that the baby (a male) was born on the afternoon of April 22nd. He is said to be a healthy child, and weighed 9 lb. at birth. The labour was practically uneventful. Conception took place on the afternoon of July 28th, 1917; the duration of pregnancy was, therefore, 268 days. The father of the child is a boy of about the mother's own age. Shortly before having connection with her he presented her with a ring. The affection appears to have been mutual, and the couple apparently regarded themselves as man and wife, so that the case has a psychological as well as a medical interest.

INFANTILE KALA-AZAR IN FRANCE.*

By MARCEL LABBÉ, TARGHETTA, and AMEUILLE.

INFANTILE visceral Leishmaniasis, which is also known by the name of infantile kala-azar or Mediterranean splenomegalic infantile anæmia, has not hitherto been observed in France, apart from cases which had arrived so recently that the disease could not be regarded as having been contracted in this country.

We have just observed two undoubted cases which appear to have actually originated in France, and which show that our territory is as liable to the disease as other neighbouring countries on the Mediterranean such as Italy, Sicily, and Tunis. The cases occurred in two Serbian refugee children at Nice—a girl, aged 9 years, and her brother, aged 6 years. The girl was taken ill with fever of an oscillating type on September 15th, 1917, and ever since has continued to have febrile attacks, at first every day, and then at longer intervals, accompanied by enlargement of the liver and spleen without intestinal disturbance. The boy showed his first symptoms at the end of December, 1917, with a temperature curve similar to that of his sister and almost identical symptoms, but without increase in size of the liver. Both present a marked degree of anæmia and emaciation, but at present are improving, perhaps under the influence of intravenous injections of emetique.

In January, as the result of puncture of the liver in the girl and of the spleen in the boy, some drops of blood were obtained containing a large number of Leishman bodies, both free and in the macrophages.

* A communication made to the Académie de Médecine, Paris, on April 2nd, 1918.

The diagnosis was confirmed by Prof. Laveran, who kindly examined our specimens. The same parasites were also found, but with much greater difficulty, in blood taken from the boy's finger.

These two patients undoubtedly contracted their illness in France. They arrived in this country at the end of January, 1916, and immediately settled at Nice, eighteen months before the earliest symptoms appeared. If they had contracted the disease out of France the incubation period would have been eighteen or twenty months, which is unlikely. The incubation period of infantile kala-azar is certainly long, but its duration is undoubtedly shorter than this, since the disease has been found in children under 1 year old; the earliest case, recorded by Cathoire, was in a child, aged 6 months, and, even if it had been infected at birth, the incubation period would have been only just six months.

Infantile visceral Leishmaniasis has been attributed to contamination of the children by infected dogs. Canine Leishmaniasis was found by Pringault on the Mediterranean coast from Marseilles to the Italian frontier. It is, therefore, not improbable that the children living at Nice were infected in this way, especially as two months before the appearance of the first symptoms in the older child their mother had made the acquisition of a native dog, which lived with the family. This animal was killed, and carefully examined by us. Leishman bodies were not found in the viscera. The bone-marrow, however, appeared to be in an active condition, and the spleen was large, hard, and presented old infarcts and perisplenitis with omental adhesions. It is possible that the animal had been ill previously, and had had time to recover completely, as is frequently seen in canine Leishmaniasis.

Probably infantile kala-azar is not extremely rare in the district in which these two cases occurred, although no cases have hitherto attracted medical attention there. The doctors who first examined our patients first diagnosed enteric fever and then malaria.

Another patient examined by us, an infant, aged 15 months, developed the same series of symptoms—irregular fever, considerable enlargement of the spleen and liver, extreme emaciation and anæmia of the same type as in the two previous cases—but finally recovered. In all probability this was also a case of infantile Leishmaniasis, but there was considerable doubt at first, and malaria was thought of before a definite diagnosis was given, and when this was made on clinical grounds it was too late to confirm it by making an examination for the parasite.

To sum up, infantile visceral Leishmaniasis exists in France, at

least in the region of our Mediterranean coast in the neighbourhood of the Italian frontier. It is met with in this territory in association with canine Leishmaniasis, with which it is perhaps causally connected. Probably the cases will increase in number when more attention is given to the disease.

AN EPIDEMIC OF FAMILIAL SYPHILIS.*

By E. JEANSELME and Mme. CHATELAIN.

THE following history is a lamentable example of familial contagion. Syphilis was introduced into a vigorous and healthy family composed of a father, mother, and *ten* children by a soldier on leave, the husband of one of the daughters.

Contamination by soldiers is unfortunately very frequent; every day at our out-patient department at the Fracastor dispensary, which is attached to our service at the Hôpital Broca, we see a number of women, many of them mothers of a family, with a hard chancre which has appeared from a fortnight to a month after the return of their husband to the Front.

Sometimes even the infection is propagated to several members of a family. In the present case it gave rise to six victims. A young woman, aged 28 years, three weeks after the return of her husband who had been at the Front for nine months, presented a vulvar chancre, which was soon followed by a typical roseola and intense headache.

At the height of the secondary stage she suckled her baby, which was born a few days after her husband's return. She has erosive syphilides on both her breasts, and her infant son developed buccal syphilides and then anal lesions. The child was weaned about the age of 10 months. The grandmother, aged 49 years, frequently gave the bottle to the child, and to make sure that the milk was not too hot she used first to put the teat in her mouth. Consequently, in her case also, the lesions first appeared in the mouth, and the chancre was apparently situated on the left tonsil. This woman still presents active buccal syphilides.

A sister of the first victim gave birth six months ago to a perfectly healthy child. He was often entrusted to the care of its aunt and grandmother, and was infected by one of them. The primary lesion

* A communication made to the Société médicale des Hôpitaux de Paris on July the 6th, 1917.

was situated in the palate, and was rapidly followed by a roseola and mucous tubercles in the mouth. The child was suckled by its mother, who in her turn became contaminated, and at the present time still has a hard chancre at the base of the right nipple.

Finally, another sister of the two mothers, aged 14 years, who was looking after her two little nieces, and tasting the food she gave them with their spoons, developed in her turn buccal lesions and cutaneous syphilides.

The family still has three members who have escaped. One girl, however, aged 12 years, is sleeping in the same bed as her sister, aged 14 years, who is infected, and there is little chance of her escaping.

This story requires no comment. It proves the urgency of a prophylactic control of men on leave. A regulation does exist forbidding men who are contagious being granted leave. Why has it not been observed?

A FIFTH CUSP AND HEREDITARY SYPHILIS.*

By C. MANTOUX.

SOME months ago Sabouraud† drew the attention of clinicians to a dental malformation characterised by the appearance of a mamillary eminence on the inner surface of the first upper molar, or, more precisely, on the inner surface of the anterior cusp of this tooth. This eminence corresponds to a supplementary or fifth cusp, which is more or less developed, and is connected with the four normal cusps. According to Sabouraud, it is invariably associated with syphilitic heredity, and is alone a sufficient guarantee of its existence; furthermore, the Wassermann reaction was invariably positive in the twenty cases observed by Sabouraud.

A statement of this kind required control observations. Ever since the publication of Sabouraud's article, *i. e.* since last March, we have made a systematic examination of the teeth of patients under treatment in the clearing station for tuberculous soldiers at the Hôpital Laennec. In seven of our cases we found a supplementary cusp exactly corresponding to Sabouraud's description. None of our subjects presented, either in his family or personal history, anything

* A paper read before the Société Médicale des Hôpitaux de Paris, October the 26th, 1917.

† R. Sabouraud, "Sur un signe dentaire de l'hérédosyphilis," 'Presse Méd.,' March the 22nd, 1917, p. 169.

suggestive of hereditary syphilis, and the most careful examination made in each case did not reveal any stigma.

The Wassermann reaction was carried out in our seven patients. It was negative in five and positive in two. But these two patients were suffering from acquired syphilis, one of them presenting leucoplakia of the tongue, and the other had been treated ten years previously for a hard chancre, followed by characteristic secondaries.

While we were carrying out these observations, Mozer and Chenet* made a similar investigation of the fifth cusp among the children in the hospital at Berck. They found it in nineteen cases, none of whom presented symptoms of heredo-syphilis, and who all had a negative Wassermann reaction even after re-activation.

The observations of Mozer and Chenet, like our own, are in complete contradiction to those reported by Sabouraud. The fifth cusp, which has long been known to dentists, is regarded by them as a morphological variation, and is frequently observed apart from any syphilitic heredity.

Perhaps it is found more frequently in the heredo-syphilitic than among other subjects. Personally, we have recently seen a case in a child of one of our patients who is both syphilitic and tuberculous. On the other hand, Mozer and Chenet have found it present in only one out of sixty heredo-syphilitic children.

Further investigations will be required to settle this point: but it may now be affirmed that the fifth cusp is very far from being "a certain sign of syphilitic heredity."

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, February the 22nd, 1918.

Dr. J. PORTER PARKINSON *in the Chair.*

Case of Hæmophilia with Effusion into Knee-joints.—Mr. P. B. ROTH (*vide* p. 116).

Case of Enlarged Liver and Spleen.—Dr. J. PORTER PARKINSON showed specimens from his case which he had brought before the Section in November, 1917 (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1918, xv, p. 48). The patient had died in the middle of January. For a fortnight previously the temperature had been raised to about 102° F.

* Mozer and Chenet, "Les stigmates dentaires de l'hérédosyphilis: la valeur de la 5^e cuspidé," 'Presse médicale,' September the 20th, 1917, p. 541.

each day, but no fresh physical signs were observed. The liver and spleen were unchanged in size. Post mortem both lungs were found to be fibrous at the roots with enlargement, but there was no caseation of the bronchial glands. Miliary tubercles were scattered throughout both upper lobes, and there was a small amount of greenish lymph on the surface of each lung. The pericardium contained about a pint of thick greenish-yellow pus in which pneumococci were found, and was densely adherent to the left lung. The heart was covered with a ragged deposit of lymph, and its surface was distinctly fatty. The valves were competent. There was no free fluid in the abdominal cavity. The liver was only slightly enlarged and weighed 38 oz. It was typically hobnailed, and the capsule was slightly thickened. The cut surface showed a coarse multilobular cirrhosis, and microscopically there was much exudation of leucocytes round the portal canals. Tubercles were scattered throughout. The spleen was much enlarged and weighed 15 oz.; the capsule was slightly thickened. It contained numerous tubercular masses, many of which were caseating. Microscopically there was a marked general infiltration with lymphocytes. The kidneys weighed $4\frac{3}{4}$ oz. and 5 oz. respectively, and were much congested. The capsule stripped with difficulty and was much thickened. There was marked cloudy swelling of the convoluted tubules with infiltration of the intertubular tissue with leucocytes, and a few scattered miliary tubercles. The mesenteric glands were enlarged but not caseous. No tubercles nor ulceration were seen in any part of the intestine or peritoneum. Clinically, the boy had had occasional rises of temperature for a week or so with apyrexial intervals. There were breaking down glands in the neck and signs of enlargement of the liver and especially of the spleen. Dr. Parkinson thought the splenic enlargement might be due to tuberculosis alone, though the enlargement was greatly in excess of what was usually found. The cause of the cirrhotic liver was not obvious. Syphilis could be excluded, as the Wassermann reaction was definitely negative on three occasions and there was no reason to suspect alcohol as a cause.

Enlarged Suprarenals and Sudden Death in an Infant.—Dr. ERIC PRITCHARD showed specimens of enlarged suprarenals from an infant, aged 5 weeks, who died suddenly. Post mortem no cause of death could be discovered. The suprarenals were very large, about the size usually found in a foetus at the sixth month. They were quite normal in appearance, macroscopically and microscopically. The thymus and other glands were also normal.

SECTION OF DERMATOLOGY.

January the 17th, 1918.

Case of Keloid in a Girl, aged 7 Years.—Dr. S. E. DORE showed a girl who was said to have been bitten five weeks previously by a dog on the left cheek in several places. Three weeks later, when she was first seen by Dr. Dore, there were linear keloidal growths at the inner and outer canthus of the left eye and similar raised growths along the naso-labial fold, at the angle of the mouth, and in the centre of the cheek. Dr. Dore was inclined to apply radium at once, but said that Dr. Whitfield held that cases of this

type which he regarded as one of hypertrophic scar tissue and not true keloid improved spontaneously, and should not be treated for several months.

February the 17th, 1918.

A Case of Linear Lichen Planus.—Dr. F. G. GRAHAM LITTLE showed a boy, aged 12 years, with a typical eruption of lichen planus, extending in a sharply demarcated line from a quarter to half an inch wide, stretching from the middle of the left buttock along the thigh and leg and passing behind the internal malleolus to terminate at the inner edge of the foot. Just below the buttock the line broadened out into a less well-defined patch which continued in the direction of the line, which was resumed again about the middle of the thigh. There were no lesions elsewhere.

Case for Diagnosis.—Dr. S. E. DORE showed a girl, aged 13 years, who had had a persistent excoriation of the toes and dorsal and plantar surfaces of the feet for five months. No treatment had been of any avail. No ringworm fungus had been found, and bacteriological examination showed staphylococci only. An artefact and tuberculosis could be excluded and the condition did not seem to possess the characters of dermatitis repens. Both Dr. Gray and Dr. Graham Little were inclined to regard the case as one of ringworm.

Case for Diagnosis.—Dr. S. E. DORE also showed a girl, aged 7 years, with symmetrical scaly slightly raised patches which had been present for five years and had not yielded to any treatment. At first sight they resembled seborrhœic dermatitis, but the chronicity, the marked accentuation of the natural furrows producing the appearance of wrinkles, and the freckling and slight alteration of the texture of the skin negated his diagnosis. Dr. Pernet had suggested that it might be an early stage of what he had called “atrophoderma reticulata faciei” (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1917, xiv, p. 213), and would probably end in atrophy. At present, however, there was no atrophy, and although scales were present they were not like the adherent crust of lupus erythematosus, another diagnosis suggested. The condition had remained stationary and comparatively free from inflammation under treatment by soothing astringent lotions, such as lead and calamine, but any attempt to use resolvents such as sulphur or salicylic acid or tar was immediately followed by erythema and a tendency to spread.

Abstracts from Current Literature.

Diseases of the Blood.

Amino-acid nitrogen in the systemic blood of children (*Journ. Amer. Med. Assoc.*, 1916, LXVII, p. 262).—C. J. V. Pettibone and F. W. Schlutz have examined the blood of over sixty children, ten of whom were normal healthy subjects. They find that while the amounts of amino-acid nitrogen in the blood of children appear to be somewhat lower than the accepted values for adults, there were no consistent or characteristic variations of the amount in the specific diseases examined, and no increase or decrease in fever.

T. R. WHIPHAM.

Brief report of 68 blood examinations in infancy (*Arch. of Ped.*, 1916, xxxiii, p. 757).—**H. M. McClanahan** and **A. A. Johnson** review the recent literature of the blood in infants, and record their studies on the leucocytes of 68 infants, aged from 3 weeks to 12 months. They found—(1) that the blood of the infant varies from that of the adult in the high proportion of the lymphocytes; (2) that there is a gradual but irregular increase in the polymorphonuclears during the first year of life.

J. D. ROLLESTON.

The cholesterin content of the blood in the exudative diathesis (*La Pediatria*, 1918, xxvi, p. 1).—**S. di Stefano** publishes the results of his investigations on 20 cases comprising Czerny's three types—the thin, the fat, and the thymico-lymphatic, and characterised by skin eruptions, catarrh of the mucous membranes, and hypertrophy of the lymphoid organs. In 4 cases the percentage of cholesterin was normal, according to the age, in another 4 there was a slight increase, and in 12 a true hypocholesteremia. There was no constant relation between the cholesterin content and the diathetic manifestations, nor any parallelism between its amount and the state of nutrition of the infant. The results obtained may be explained on the hypothesis of a hypocholesteræmia from increased elimination, for it is known that the liver is the organ of elimination of cholesterin, and that a primary hypertrophy of this organ is frequently met with in infants of this type. Since cholesterin is an important element in the defence of the organism, it may logically be assumed that its diminished percentage in the blood may be partly the cause of the frequency in these children of inflammatory processes in the skin, mucous membranes, and lymphoid organs.

VINCENT DICKINSON.

Eosinophilia in infants following the ingestion of a foreign protein (*Arch. of Ped.*, 1916, xxxiii, p. 742).—**H. C. Berger** found that when a protein which the infant had never previously ingested was introduced into its diet there was usually an increase in the number of eosinophiles in the general circulation. As a rule, these appeared in from nine to twelve days after the ingestion of the protein, and very soon the eosinophile percentage returned to the normal.

J. D. ROLLESTON.

A case of anæmia of "pernicious type" in an infant (*Med. Journ. of Australia*, 1917, i, p. 549).—**B. Bradley**.—The patient was 11½ months of age, with a decrease of red cells and hæmoglobin in the blood, but they recovered with arsenic, which raised the colour index to 1.3. The number of leucocytes varied from 37,000 to 7000. The red cells were like those in pernicious anæmia. A large number of nucleated red cells were present. The child is still under treatment.

F. R. B. ATKINSON.

Two cases of aplastic anæmia (*Arch. de Méd. des Enf.*, 1916, xix, p. 525).—**E. Gorter**.—Case 1: Boy, aged 6 years. He had always been pale, but the pallor became worse three weeks before death. Appetite bad, vomiting frequent. Petechiæ scattered all over body. Hb., 17 per cent.; red cells, 700,000, with anisocytosis, no poikilocytosis, no nucleated cells, and no polychromatophilia. Considerable leucopenia: 1600–1700 leucocytes, consisting of polymorphs, 11.5 per cent.; lymphocytes (large and small), 88 per cent.; large mononuclears, 0.5 per cent. Post-mortem petechiæ were found in the heart, lungs, stomach, intestine, and serous membranes. There was fatty degeneration of the various organs, especially of the myo-

cardium and liver. The bone-marrow of the sternum, ribs, and humerus was yellow. Case 2: Boy, aged 3 years. Marked pallor for four months without apparent cause. Pecthiæ all over body, high fever and convulsions. Hb., 25 per cent.; red cells, 1,250,000; leucocytes, 2700; no nucleated red cells. Slight enlargement of the lymphatic glands and of the liver and spleen. No autopsy.

J. D. ROLLESTON.

Perniciousⁿ anæmia in a boy aged 8 years ('*Amer. Journ. Dis. Child.*,' 1917, xiv, p. 301).—J. L. Morse and S. B. Wohlbach.—When he was 5 years old he began to complain of feeling tired; he became very pale, and the skin took on a yellowish tinge. At 6½ years old the hæmoglobin was 28 per cent., the red cells numbered 1,600,000, and the leucocytes 8000. He remained in poor health and the next blood-count taken on admission to hospital when he was 8 years and 3 months old was as follows: Hæmoglobin, 15 per cent.; red cells, 860,000; leucocytes, 8000. Ten normoblasts and one megaloblast were seen to each 200 leucocytes. The temperature was between 100° and 101° F. On the day before his death, nine days later, the hæmoglobin was 10 per cent., the red cells 570,000, and the white cells 6200. No cause for the pernicious anæmia could be made out. The necropsy showed anæmia, fatty degeneration of the heart, liver, and kidneys, hypertrophy and dilatation of the heart, hyperplasia of the bone-marrow, and marked thickening of the calvarium due to a compensatory hyperplasia of the marrow of the diploë.

J. D. ROLLESTON.

A case of Hodgkin's disease involving the stomach ('*Cleveland Med. Journ.*,' 1917, xvi, p. 94).—S. P. Reiman.—A boy, aged 14 years, was admitted to hospital for pain in the left lower thoracic region of a fortnight's duration. No other symptoms were present. Examination showed slight enlargement of the submental gland and much enlargement of the posterior cervical glands. On admission the hæmoglobin was 70 per cent., the red cells 4,640,000, and the leucocytes 17,000. The hæmoglobin and red cells steadily diminished, the former falling through 60 per cent., 50 per cent., to 18 per cent., and the latter to 440,000. At first the red cells showed no morphological changes, but gradually more and more polychromatophilia, anisocytosis, and poikilocytosis were noted and nucleated cells were found. In all the counts there was an increase in the number of the platelets. The patient was treated with X rays and cacodylate of soda hypodermically, but the cervical glands enlarged steadily and an increasing area of dullness over the sternum and some abdominal pain with tenderness and free fluid set in. Death took place five months after admission. In addition to the usual findings in Hodgkin's disease the necropsy showed four very small punched-out ulcers at the cardiac end of the stomach. Microscopical examination showed that the type of involvement of the stomach was endothelial hyperplastic fibrosis and lymphocytic infiltration. In spite of definite ulceration there were no symptoms referable to the stomach. The patient is the youngest case of this type on record.

J. D. ROLLESTON.

Leukæmia, with some observations on benzol ('*New York State Journ. Med.*,' 1917, xvii, p. 116).—F. S. Winslow and W. D. Edwards report a case in a boy, aged 14 years, treated with benzol. The initial dose of benzol was 10 minims per day, rapidly increased to 90 minims per day. During the use of benzol the following points were noted: (1) Benzol produced marked diminution of white cells; (2) it frequently produces marked

irritation when given by the mouth, *per rectum*, subcutaneously or intravenously; (3) it is a dangerous drug, and its administration should be carefully watched for both the symptoms of benzol poisoning and for a too marked or too rapid reduction of the white cell-count; (4) it should not be used intravenously.

J. ALLAN.

Acute myelogenous leukæmia in an infant (*Amer. Journ. Dis. Child.*, 1916, xi, p. 462).—J. H. Mason Knox, junr., records a case in a female infant, 9 months old, the youngest on record. The rapid course of the disease—less than three weeks—is also noteworthy. There was no enlargement of the lymphatic glands or spleen, and no evidence of hæmorrhage or necrosis of the mucous membranes. The symptoms principally consisted of nausea and vomiting almost immediately after food, with frequent retchings between the feeds. There was moderate, continuous fever. The blood picture showed moderate secondary anæmia, no marked reduction in the number of the red cells, and very few nucleated reds. The leucocytes numbered 200,000, and the myelocytes 19·8 per cent.

J. D. ROLLESTON.

The leukotoxic factor in lymphatic leukæmia (*Journ. Amer. Med. Assoc.*, 1917, LXVIII, p. 954).—M. Packard and R. Ottenberg record a case of aleukæmic leukæmia, which finally developed into a typical chronic [*? acute*] lymphatic leukæmia in a boy, aged 3 years. For the first two weeks the white cells were not above 4200 per c.mm., but of these over 90 per cent. as a rule were large lymphocytes according to the table given, though the text describes a predominance of the small variety. Within a week the white cells rose to 60,000, and a fortnight later to 160,000, the large lymphocytes then numbering 99 per cent. At this time a large blood transfusion was performed, and it was found twenty-four hours later that the granular leucocytes which had been injected had entirely disappeared from the circulation, an occurrence which is the rule after transfusions in lymphatic leukæmia. There are two possible explanations of this phenomenon. Either the leucocytes were removed from the circulation and held in some internal organs, or they were destroyed. Which of these two possible explanations is the correct one can be settled only by extensive post-mortem study. But from the fact that in cases of lymphatic leukæmia in which there is almost a disappearance of polymorphonuclear leucocytes from the circulation, one does not find polymorphonuclears in any large numbers in the tissues or organs, it seems far more probable that the transfused leucocytes were very rapidly destroyed in the present case by some toxic agent. That this destruction of leucocytes was not due to any destruction of the transfused blood as a whole was shown by the absence of icterus or hæmoglobinuria after the transfusion, and by the pronounced rise in the total number of red cells on the day after transfusion, as well as by the fact that before transfusion very careful tests were made to preclude hæmolytic or agglutination between the blood of the donor and that of the patient. The patient died six days after the transfusion.

T. R. WHIPHAM.

Prognosis and treatment of Banti's disease in children (*Arch. of Ped.*, 1916, XXIII, p. 801).—E. E. Graham.—Banti's disease tends to run a more acute course in children than in adults. If not treated, or only treated medicinally, it is almost invariably fatal. Under surgical treatment the prognosis is more favourable and depends on the duration of the

disease when the spleen is removed. In children, splenectomy is even more advantageous than in adults, and complete recovery is the rule with the rapid disappearance of all symptoms. After the operation the blood-picture in most cases approaches normal, but in a few cases it may vary greatly, so that five years may elapse before the differential count becomes normal. Splenectomy is both useless and dangerous in cases where hæmoglobin is below 30 per cent. and the red cells are below 2,000,000. The operation should as a rule only be attempted when there is no œdema, no parenchymatous nephritis, no serious degenerative change in the liver, and while the patient is still able to go about. In 25 per cent. of cases of Banti's disease there is afterwards pain in the long bones, probably due to hyperplasia of the bone-marrow. There is always the danger of gastro-intestinal hæmorrhage or secondary infection owing to lowered power of resistance, especially during the first two weeks after operation.

J. D. ROLLESTON.

Gaucher's disease (*New York Med. Journ.*, 1918, cvii, p. 118).—**M. S. Reuben** relates two cases of this disease, diagnosed during life, in children aged 2 and 4 years respectively. The first symptom noted was a painless enlargement of the spleen which became exceedingly large. The liver was slightly enlarged. There was a mild anemia and persistent leucopenia with a normal differential count. There was a yellowish or brownish bronzing of the skin affecting the neck, face, and limbs, slight hæmorrhages from the nose and gums, and, later, abdominal pains and increasing lassitude. The course of the disease is more rapid the earlier it appears, and apparently splenectomy does not cure. The section of the spleen shows firm, yellow-white, pyramidal areas consisting of dense connective tissue; the remainder of the spleen shows large, irregular spaces with walls of delicate connective tissue, containing large cells of varied shape and small nuclei and some giant cells. The Malpighian bodies are unchanged. The disease is familial and is diagnosed by this, with the progressive splenic enlargement, with leucopenia, and the absence of ætiological factors and of jaundice, ascites, urobilinuria, and fever. There is no other disease of infancy in which the spleen and liver may be so enormously enlarged.

J. PORTER PARKINSON.

Chloroma (*Arch. of Ped.*, 1916, xxxiii, p. 417).—**E. W. Gould** and **L. T. Le Wald** report two fatal cases in a boy, aged 5 years, and a girl, aged $3\frac{1}{2}$ years, respectively, who presented the following characteristic features of the disease: Exophthalmos, swelling of the temporal and occipital regions, enlargement of the spleen and glands throughout the body, especially of the cervical region, and a severe and progressive anæmia, causing weakness, fever, and emaciation. The X rays showed a distinct separation of the cranial sutures, and the following changes in the long bones. The medullary portion showed a peculiar mottling due to rarefied areas, and the periosteum was distinctly raised from the surface of the bone over the greater portion of the shaft. No autopsy was allowed in either case.

J. D. ROLLESTON.

Chloroma (*Journ. Amer. Med. Assoc.*, 1917, lxxviii, p. 1900).—**G. B. Kramer** and **T. L. Birnberg** report a case of chloroma in a girl, aged 4 years, who died in less than three months from the onset of symptoms. In addition to the involvement of the cranium, deposits were found in all the thoracic and abdominal viscera and in the periosteum of the clavicles and ribs.

T. R. WHIPHAM.

Lympho-granulomatosis infantilis ('*La Pædiatria*,' 1916, xxiv, p. 193).—A. F. Canelli describes the case of a boy, aged 5 years, with a syndrome of malignant lymphoma in whom the autopsy showed subacute tuberculosis of the spleen, miliary nodules in the lungs and liver, and atypical granules in various lymphatic glands. Microscopically, there was granulomatous hyperplasia of lymphoid type in various stages of development. Pathologically, the case was one of infantile granulomatosis of the lymphatic glands, with participation of other organs, notably the spleen and liver, of subacute course, definitely febrile and with severe anæmia. Points of special interest in the case were the absence of polynucleosis and eosinophilia, while there was a true lymphocytosis due probably to a peculiar condition of the lymphoid system. The liver was much enlarged, partly from fatty and partly from granulomatous infiltration. The spleen was enlarged and hard. There were no cutaneous manifestations.

VINCENT DICKINSON.

The cause of sudden death in status lymphaticus ('*Amer. Journ. Dis. Child.*,' 1917, xiv, p. 463).—D. Symmers states that sudden death in status lymphaticus may be brought about in, at least, two different ways. The first and most frequent cause is of the nature of an anaphylactic reaction due to sensitisation of the body by a specific nucleoprotein formed in the lymph-nodes as the result of necrosis of numbers of germinal follicles. Before the so-called anaphylactic incubation period has expired, the tissues are again subjected to the action of the same protein formed in the same type of tissue in response to an apparently trivial injury, and in this way the anaphylactic reaction is completed. The second cause of sudden death is the spontaneous rupture of a hypoplastic cerebral vessel, or rupture following apparently trivial injury, the deficiency in the vessel wall being most noticeable in the muscular coat.

J. D. ROLLESTON

On the occurrence of purpura in the serum disease ('*Med. Klinik*, 1917, xiii, p. 1041).—H. Widmer records several cases illustrating the occurrence of purpura after injection of antitoxin for diphtheria, and comes to the following conclusions: (1) A well-marked purpura simplex may accompany the ordinary symptoms of anaphylactic shock. (2) The typical serum disease is occasionally associated with purpura, or purpura may be the only manifestation of the serum disease. (3) On application of a rubber band, skin hæmorrhages may occur, which are strictly localised to the area of the serum eruption.

J. D. ROLLESTON.

A case of purpura fulminans ('*Arch. of Ped.*,' 1916, xxxiii, p. 844).—W. M. Donald.—A previously healthy boy, aged 4 years, had a moderately severe attack of bacillary dysentery on August 7, but recovered by August 15. On September 27 he began to suffer from malaise, and a few ecchymoses appeared on the body and lower limbs. On October 4 an incisor root was extracted and the gum continued to ooze and the nose began to bleed. The following day the temperature was 104° F., the pulse 130, and the body showed numerous new ecchymoses. Punctate petechiæ were scattered over the lower limbs. Some small blood-clots were found in the fæces, but the urine remained clear. The blood-picture and absence of large lymph glands negatived lymphatic leukæmia. Death, preceded by delirium, took place seven days later. No autopsy.

J. D. ROLLESTON.

Two cases of purpura fulminans ('*Thèses de Paris*,' 1915-16, No. 46).—J. C. M. Péneau.—CASE 1: A boy, aged 4 years, who had had measles

complicated by otitis six months previously, developed extensive purpura of both legs and died within twenty-four hours. There was a leucocytosis of 32,800. The clot was non-retractile. There were no hæmorrhages from the mucosæ. Post-mortem there were hæmorrhages in both suprarenals, an infarct in the right kidney, and five hæmorrhages in the lungs. **CASE 2:** A boy, aged 3 years, who had had a sore throat one month previously and had been in poor health since, had an attack of chickenpox. Eight days later, extensive purpura appeared on the right thigh and leg and left upper limb. The next day the whole of the left forearm and hand presented the appearance of purpura fulminans. Gangrene set in on the back of the hand, but recovery took place. The blood showed a leucocytosis of 16,500, with a myeloid reaction (neutrophile myelocytes, 8 per cent.; basophile myelocytes, 2.5 per cent.; eosinophile myelocytes, 0). **J. D. ROLLESTON.**

Effect of ultraviolet rays in Leishmaniosis (*'La Pediatria,'* 1916, xxiv, p. 147).—**F. Porcelli-Titone**, experimenting on the micro-organism of Leishmaniosis, found that cultural forms, both in human and canine cases, exposed to ultraviolet rays remained alive and mobile, but lost the power of reproduction. After prolonged exposure they lost motility and formed granular masses previous to disintegration. The experiments show that the anti-reproductive action of the rays, which has been shown to be very marked on bacteria, has a similar effect on protozoa.

VINCENT DICKINSON.

Diseases of Circulatory System.

Some varieties of congenital heart disease (*'Glasg. Med. Journ.,'* 1916, II, pp. 1, 84, 140).—**L. Findlay** and **W. B. Martin** point out that in congenital heart disease physical signs and symptoms are notoriously misleading, and not infrequently a cardiac defect unsuspected during life is disclosed at autopsy, or the true nature of a suspected lesion may only be revealed on the post-mortem table. A partial explanation for this difficulty is the complex nature of the malformation usually present. The signs and symptoms, too, are not always commensurate with the severity of the defect. The varieties of congenital heart disease dealt with are: (1) Patent foramen ovale (female, aged 6 weeks); (2) patent interventricular septum (female, aged 3 months); (3) congenital stenosis of pulmonary tract with atresia of orifice-septal defects and patent ductus arteriosus (male, aged 3 months); (4) congenital stenosis of pulmonary tract, with septal defects (female, aged 2 months); and (5) patent ductus arteriosus (female, aged 1 month). In each case there are given the clinical history, full details of the post-mortem examination, and references to other recorded cases. Special points of interest in Case 1 were the extreme degree of cyanosis and the loud V.S. murmur. An interesting feature in Case 4 was the multiplicity of lesions and consequent opportunities for the production of fluid veins, and yet the absence of any murmur for long periods. This series of cases is of interest as emphasising the difficulty of diagnosis; as demonstrating how a slight cardiac anomaly, usually latent, may become manifest through the intervention of a pulmonary complication; and as substantiating the idea that congenital syphilis may play a part in the ætiology of cardiac malformations.

J. ALLAN.

Congenital endocarditis with acute vegetative inflammation of the pulmonary artery and valve (*'Amer. Journ. Dis. Child.,'* 1917, XIII,

p. 426).—**H. E. Tuley and J. W. Moore.**—A boy, aged 13 years, admitted to an orphan home on February, 1912, though certified to be normal in every respect, presented clubbing of the fingers, bulging of the chest, slow mental development, and cyanosis. A systolic thrill could be felt throughout the precordial area. A loud systolic murmur and weaker distolic murmur were heard over the entire chest, anteriorly, being more intense over the second space just to the left of the sternum. A distinct systolic bruit and a low diastolic murmur were heard over a pulsating mass behind the supra-sternal notch. Three years after admission there was little development either mentally or physically. In June, 1916, death took place from pulmonary tuberculosis. Necropsy: The heart showed acute vegetations of pneumococcal origin springing from the pulmonary valves and continuous with those projecting from the wall of the pulmonary artery. The pulmonary valves also showed diffuse nodular sclerosis. The remaining valves likewise showed a diffuse sclerosis, whereas the tricuspid and mitral valves also bore the nodular type. The foramen ovale was patent. The right auricle and ventricle were much hypertrophied and dilated, whereas the left auricle and ventricle were apparently normal. The aorta was entirely negative.

J. D. ROLLESTON.

Congenital atresia of the right auriculo-ventricular orifice with complete absence of tricuspid valves (*Amer. Journ. Dis. Child.*, 1917, XIII, p. 167).—**J. H. Hess** records a case in a male infant, aged 8½ months, who had been ailing from birth with dyspnœa and cyanosis. The fingers and toes were clubbed, the heart was enlarged, and a loud systolic murmur was heard at the base. At the necropsy practically the whole base of the heart was composed of the right auricle, the right ventricle being only a small cavity which appeared as an appendage to the right auricle. The body of the heart was composed of the left ventricle, which was greatly hypertrophied, as was also the left auricle. The right auricle was enormously dilated. The tricuspid orifice and valve were absent. The interventricular septum was perforated at the upper part of the left ventricle. The foramen ovale was patent. The ductus arteriosus was small but patent. Hess has found only eight, Oller seven uncomplicated cases of congenital tricuspid atresia—a record.

J. D. ROLLESTON.

Congenital dextrocardia with patent foramen ovale (*Amer. Journ. Dis. Child.*, 1916, XII, p. 233).—**H. J. Morgan** alludes to the paper by Moffett and Neuhoef (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1916, XIII, p. 90), and records a case in a female infant, who died at the age of 9 months, after two severe convulsions. The symptoms were dyspnœa and cyanosis. The apex of the heart was felt on the right side 6 cm. to the right of the midsternal line in the fourth interspace. The left border was 1 cm. to the left of the midsternal line at the fourth interspace, and the upper border was at the second right interspace. A rough systolic murmur was heard, loudest at the apex, on one occasion only. The liver and spleen were normal in position. There were no bony changes or clubbing of the fingers, and no other abnormalities were detected. Necropsy: The heart was globular in shape, the walls of the left ventricle very thick, most of the right rather thin with a muscular defect, which showed as a dimple on the external surface, not extending through the wall. The heart-valves were normal except for the patent foramen ovale. There was no interventricular defect.

J. D. ROLLESTON.

Abnormal viscera in a child (*Dub. Journ. Med. Sci.*, 1916, I, p. 48).

—**R. M. Bronte**, at a meeting of the Royal Academy of Medicine in Ireland, Section of Pathology, showed the viscera of a young girl showing congenital absence of the left lung with displacement of the heart leading to a hyaline formation of the pericardium at the point of contact of the apex of the heart. The intestine was gangrenous, although no thrombosis or other impediment to vascular flow was to be found. Both kidneys showed connective-tissue proliferation and parenchymatous degeneration and the liver was sclerosed and fatty.

J. ALLAN.

Complete transposition of viscera (*Med. Record*, 1916, xc, p. 1027).

—**H. T. Hartz** reports two cases in boys aged 12 and 13 years suffering from tonsillitis and pleurisy respectively, in whom the heart was completely transposed to the right side of the body with the apex in the right mid-clavicular line. The liver dulness was outlined in the left side of the body, and the stomach was transposed to the right of the mid-line. Seventy-nine cases of complete transposition of the viscera were collected by Gruber in 1865.

J. D. ROLLESTON.

Electrocardiographic studies of congenital heart disease (*Amer. Journ. Dis. Child.*, 1916, xii, p. 30).

—**H. McCulloch** reports twelve cases in patients aged from 3 weeks to 32 years, including four of pulmonary stenosis, five of defects of the interauricular and interventricular septa, two of ductus arteriosus, and one of right ventricular atrophy. Congenital malformations of the heart do not produce a distinct electrocardiogram, but the type of curve will depend on the secondary effects of the heart chambers. The effect is chiefly on the right side of the heart, and malformations associated with a secondary relative ventricular hypertrophy produce electrocardiograms with deep *S* waves in head *I* and high *R* waves in head *III*. Malformations not producing right ventricular hypertrophy do not cause a characteristic change in the electrocardiogram.

J. D. ROLLESTON.

Three cases of congenital cyanosis affecting all children in a family and a new method of diagnosis of congenital heart lesions

(*Am. Journ. Dis. Child.*, 1917, xiii, p. 1).—**J. H. Hess** and **R. G. Pearce**.—The children were boys, aged 11, 10, and 6 years. All showed an excellent mental development, and the two younger ones good physical development. The cyanosis of the skin and mucosæ was constant, and increased under various conditions, especially during physical exertion or inflammatory conditions of the respiratory tract. There was no clubbing of the fingers. All showed cardiac enlargement but no abnormal heart sounds. Electrocardiograms did not vary much from the normal, but indicated a predominance of right ventricular activity. Except for a high hæmoglobin content, the blood was normal. Examination of the respiratory exchanges showed that the cyanosis was not due to a faulty gas exchange of the blood as it passed through the lungs, but rather to a reduction of the amount of blood reaching the left ventricle from the pulmonary circulation. The diagnosis of a septal or ductus defect was therefore rendered probable.

J. D. ROLLESTON.

Heart disease in infancy and childhood (*Arch. of Ped.*, 1916, xxiii, p. 909).—**A. L. Goodman**.—Twenty-five per cent. of the admissions to the Children's Division of the "A. Jacobi Department" of the German Hospital

are cases of heart disease. Of the 25 per cent., 20 per cent. are due to rheumatism. A little over 4 per cent. result from various infectious diseases, and the remaining less than 1 per cent. are congenital heart trouble. The most common form of organic heart disease found was mitral insufficiency with accompanying double mitral murmur. A murmur, however, is not always present—*e. g.* when the deposits take place at the insertion and not at the free margin of the valve.

J. D. ROLLESTON.

A clinical classification of heart disease (*'Arch. of Ped.,'* 1917, xxxix, p. 308).—W. P. StLawrence.—The following classification has been adopted for over a year in the children's cardiac class at St. Luke's Hospital, New York. Potential cardiacs: All cases of rheumatism and allied rheumatic infection—*e. g.* chorea and tonsillitis. First degree: Valvular lesions without demonstrable evidence of muscular involvement; no symptoms, past or present, referable to the heart. Second degree: Valvular lesions with muscular involvement and mild degree of cardiac distress. Third degree: Valvular lesions with marked muscular involvement and well-defined symptoms of cardiac decomposition.

J. D. ROLLESTON.

Cardiac disease and the cardiac clinic (*'Arch. of Ped.,'* 1917, xxxiv, p. 269).—J. S. Ferguson.—Examination of a large number of school children showed that nearly 7 per cent. were affected with organic or functional cardiac murmurs. Ferguson says that it is high time that every endocarditis, not only ulcerative endocarditis, should be regarded as an infection arising from a local source. A possible source can usually be found in or about the mouth cavity and its sinuses, *e. g.* in dental caries, pyorrhœa, the tonsils, or ears, though there may occasionally be purulent processes elsewhere.

J. D. ROLLESTON.

A case of wide propagation of a cardiac murmur (*'Med. Journ. of Austral.,'* 1917, II, p. 8).—F. G. Griffiths.—The child was aged 6 years, with a loud systolic murmur heard all over the chest, back and front, down the back, over the loins, and even to the sacrum. At the inferior end of the scapula it was accompanied by a diastolic murmur. The condition arose after a mild attack of rheumatic fever.

F. R. B. ATKINSON.

Acute infective endocarditis due to streptococcus attenuans (*'Amer. Journ. Dis. Child.,'* 1915, ix, p. 33).—F. Huber records a fatal case in a female infant, aged 1 year. The disease lasted about a fortnight, and was characterised by high and irregular temperature, large hæmorrhages on the skin and bloody stools and vomit. The necropsy showed vegetative endocarditis of the mitral valve and infarcts in the spleen and kidneys.

J. D. ROLLESTON.

Case of pericarditis complicating pneumonia in an infant (*'Med. Journ. of Australia,'* 1917, II, p. 227).—E. A. Tivey.—This very rare condition was noted in a female child aged 19 months. The friction sound was quite distinct at both base and apex of the heart, and death occurred nine hours after it was first discovered. The acute symptoms of a left-sided pneumonia had almost abated twenty-four hours after their onset.

F. R. B. ATKINSON.

Mitral stenosis in young children (*'Arch. of Ped.,'* 1916, xxxiii, p. 101).—M. H. Bass records two cases in boys, aged 10 and 7 years respectively. His conclusions are as follows: (1) In mitral stenosis in

children, especially without evidence of insufficiency, syphilis should be thought of and a Wassermann reaction done. (2) Cardiac disease, especially valvular stenosis, exerts considerable influence on the patient's growth (*v. Parkes Weber, BRITISH JOURNAL OF CHILDREN'S DISEASES, 1913, x, p. 203*). (3) Study of the literature leads to the following conclusions: (*a*) Mitral stenosis has been observed at autopsy in infants. (*b*) It has been observed in children over 5 years old, in whom there was no apparent ætiological factor present. (*c*) No case of mitral stenosis has been reported in children between infancy and 5 years. (*d*) The condition described by Duroziez as pure mitral stenosis should not be confused with the rare congenital lesion in infants.

J. D. ROLLESTON.

Left recurrent paralysis and mitral disease (*'Arch. de Méd. des Enf.,'* 1918, *xxi*, p. 77).—**A. Carrau** describes a case of six months' duration in a girl aged 16 years, the earliest on record. The time of the appearance of the aphonia in relation to the cardiac disease is noteworthy. In some cases the recurrent paralysis occurs during an attack of failing compensation, but in the present case the patient had already had such attacks without any effect on her voice, and it was not until six months after the termination of an attack that the aphonia suddenly appeared. Carrau gives the following explanation of the paralysis: The dilated left ventricle compresses and deforms the pulmonary artery, which in its turn presses upon the recurrent laryngeal nerve giving rise to the neuritis, which is the origin of the immobility of the vocal cord and prolonged dysphonia.

J. D. ROLLESTON.

The elucidation of some arrhythmias of the heart in children by means of the electrocardiograph (*'Arch. of Ped.,'* 1917, *xxxiv*, p. 128).—**R. H. Halsey**.—The electrocardiograph is the only instrument which, regardless of the physical form of the patient, can tell the position or alterations in cardiac position; the preponderance in mass of one chamber over the other, the location of lesions; the source of the impulses producing contractions; that the control is normal or abnormal, the time and sequence of chamber contraction; the explanation of some physical signs; the functional efficiency of the auriculo-ventricular conduction; differentiate between heart rates of varying origin; and record precisely the effect of drugs on the cardiac mechanism. Eleven illustrative electrocardians are reproduced.

J. D. ROLLESTON.

Paroxysmal tachycardia in childhood (*'Amer. Journ. Dis. Child.,'* 1917, *xiv*, p. 287).—**N. W. Brown** records a case in a boy, aged 3½ years, who had had attacks of rapid heart action since he was twelve months old. Predisposing factors were gastro-intestinal disorders and malnutrition during infancy. The paroxysms usually occurred every three or four days, and lasted from two to thirty-six hours. The pulse, which was normally 90 to 112, rose during the paroxysms to 180 or 200. The paroxysms began and ended abruptly. They were accompanied by slight pallor, lessened activity, and jugular pulsation. They had recently been less frequent and severe. Electrocardians showed inverted *P* with beginning of *T* wave and auricular tachycardia. The writer has collected nine other cases of paroxysmal tachycardia in children under 10, including those of Hutchison and Parkinson (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, xi, p. 241*), and Kidd (*ibid.*, p. 264).

J. D. ROLLESTON.

Paroxysmal tachycardia in children ('*Amer. Journ. Med. Soc.*,' 1917, CLIV, p. 834).—**H. Koplik** records three personal cases. Case 1: Male, aged 22 months, the youngest on record. The primary attack occurred a fortnight after an attack of influenza, the symptoms being those of an acute breakdown of the heart with exceedingly rapid rate and signs of cardiac weakness, viz. general oedema, cyanosis, swelling of liver and spleen and general dyspnoea. Improvement and apparent cure took place, but regular attacks of paroxysmal tachycardia of varying duration ensued. The cyanosis and general oedema did not reappear. During the paroxysms the child was not uncomfortable. He would at times sit and play with a pulse of 204, or be quiet and pale, with eyelids slightly puffy and say he felt tired. A tachycardia was established on some form of infective myocarditis. Case 2: Girl, aged 3 years. History of attacks of palpitation for three months. Very few symptoms objectively or subjectively, though there were nearly 250 ventricular beats per minute. Case 3: Boy, aged 10 years. The paroxysms varied in duration from three minutes to forty-eight hours. During an attack the heart was very irregular at times, and there were periods of irregular flutter with heart-block. Between the attacks the rhythm of the heart might also be irregular and show periods of block even when digitalis had not been given. The cardiograms showed that cases 1 and 3 were examples of auricular tachycardia. **J. D. ROLLESTON.**

A case of bradycardia ('*Med. Press*,' 1916, I, p. 597).—**F. Spicer**, at a meeting of the British Oto-Laryngological Society, showed a boy, aged 15 years, who suffered from bradycardia or slow action of the heart. On arranging for a nasal operation it was stated that there was something wrong with the heart, and on communicating with the physician who had treated him it was learned that bradycardia existed and rendered an operation dangerous. The physician treated the patient for six months, and then saw the anaesthetist before the anaesthetic was given. The operation was carried out at a nursing home, every precaution having been taken to be ready for any emergency which might arise. The turbinates were removed, and there was not much bleeding. Suddenly, at the end of the operation, the heart and breathing stopped, and it was thought the patient was dead. Artificial respiration, however, revived him. **J. ALLAN.**

Ascitic hepato-myocardiac syndrome ('*La Pediatria*,' 1917, xxv, p. 401).—**C. Martelli** describes this case of a girl, aged 2½ years, with enormous ascites, large liver with intense hyperaemia from stasis, and cardiac insufficiency from myocarditis and fatty degeneration. He considers that there are met with in children stupendous ascitic syndromes, unaccompanied at first by peripheral oedema, recalling cases of tuberculous peritonitis or hepatic cirrhosis, to the detriment of an accurate diagnosis and successful treatment. These syndromes are caused by a congenitally large liver of plethoro-lymphatic type, aggravated by myocardiac debility, and are related to the cardio-cirrhosis of Hutinel and the hepatic pericardial pseudo-cirrhosis of Pick. Exact and early diagnosis is of great practical value, since treatment directed to overcome the hepatic engorgement and relieve the heart may prolong life. **VINCENT DICKINSON.**

Two cases of congenital persistent acroasphyxia in infants ('*Amer. Journ. Med. Sci.*,' 1917, CLIV, p. 500).—**N. Toomey** reports the youngest examples hitherto recorded of the disease first described by

Nothnagel in 1867, since when about thirty-five cases have been published. Case 1: Negress, aged 9 months. The condition was first noted in the second week of life, and gradually became worse. The lesions developed synchronously in hands and feet, which showed marked cyanosis and coldness of the skin not affected by inclement weather. The cyanosis was equal on the two sides, and was uniformly distributed from the finger-tips to the carpal furrow, and in the feet over the plantar surface to the malleoli, but only half way up the dorsal surface of the feet. Case 2: White infant, aged 7 months. Cyanosis of hands and feet was first noticed on the second day after birth. There were distinct remissions in the asphyxia. The lesions were symmetrically distributed and of equal intensity over both hands and feet. The asphyxia involved the whole hand to the wrist at the level of the styloid processes. The feet were also completely involved.

J. D. ROLLESTON.

Obliteration of the inferior vena cava in a boy aged 12 years (*Arch. de Méd. des Enf.*, 1917, xx, p. 418).—J. Comby. —The patient was admitted to hospital for erysipelas of the lower limbs with cough and progressive dyspnoea. The temperature had been high for some days. The erysipelas subsided in ten days, but the temperature kept high and the lower limbs resembled those of a case of elephantiasis. The abdomen was enlarged, and showed a marked collateral circulation. Death, preceded by hæmatemesis and intestinal hæmorrhage, took place after an illness of about six months. At the necropsy complete cardiac symptoms were found. The inferior vena cava was surrounded and obliterated by fibrous tissue. The liver was large and fatty. There was considerable ascites. No tuberculous lesions were found, but pulmonary oedema hydrothorax and pleural adhesions were present.

J. D. ROLLESTON

Relapsing phlebitis of the tributaries of the inferior vena cava (*Arch. de Méd. des Enf.*, 1916, xix, p. 636).—A. Roux records a case in a girl, in whom phlebitis of the inferior vena cava and portal vein occurred on several occasions, viz. after varicella and after scarlet fever, at the age of 5½ years, and after a probable attack of typhoid fever at the age of 12 years. The symptoms were prominence of the cutaneous veins of the trunk and thighs, enlargement and tenderness of the liver and spleen, albuminuria, oedema of the legs, and fever. At the age of 13 she had a fresh attack of fever, oedema, and albuminuria, and a similar attack the following year. The occurrence of puberty did not improve the venous circulation; though there was some diminution of the venous network on the trunk, the state of the legs remained the same, and small varicose ulcers appeared which took a long time to heal. At the age of 15 two attacks of intestinal hæmorrhage occurred. Treatment of all kinds has proved unavailing, and the child has become a chronic invalid.

J. D. ROLLESTON.

Congenital obliteration of the aorta (*Amer. Journ. Dis. Child.*, 1916, xii, p. 606).—H. Gauss records a case in an infant boy, apparently normal at birth, who died suddenly in the third day of life. The necropsy showed atresia of the aorta at the orifice; total absence of the aortic valves; hypertrophy of the left ventricular wall; dilatation of left ventricle; considerable enlargement of pulmonary artery; common opening of the coronary arteries; partial apneumatoses of the lungs; multiple hæmorrhages in epicranium, pericardium, liver, kidneys, thymus, and suprarenals, hydrocele, and adherent umbilical cord.

J. D. ROLLESTON.

Typhoid gangrene in a child (*Paris Méd.*, 1917, VII, p. 402).—A. Vinache.—Three weeks after the onset of typhoid fever, when convalescence seemed to be established, a girl, aged 4 years, suddenly developed pain in the left leg, which became pale, cold, and insensitive. In the next few days gangrene developed. Amputation was performed at the seat of election and recovery took place. Hereditary changes in the vessels, due partly to paternal and grandpaternal alcoholism, are held responsible for the condition.

J. D. ROLLESTON.

Diseases of Urogenital System.

The bacteriology of the urine in healthy children and those suffering from extra-urinary infections (*Amer. Journ. Dis. Child.*, 1916, XII, p. 345).—C. Beeler and H. F. Helmholtz.—In 118 specimens of carefully catheterised urine from 61 girls, 61 were sterile and 57 contained bacteria. Of those from normal infants, 13 were sterile and 11 contained bacteria. Of those of extra-urinary infections in patients under 2 years, none were sterile and all contained organisms. In those from girls over 2 years, 38 were sterile and 22 contained bacteria. The number of bacteria was considerably larger in the infants, probably because the urethral orifice could be cleansed more easily in the older children. The bacteria were practically the same in both, Gram-positive cocci and diphtheroid organisms prevailing. The writers' conclusions are as follows: (1) Organisms of the coli group are not normal inhabitants of the female urethra; (2) in extra-urinary infections in the first two years of life the coli group of bacilli are frequently found in the urethra; (3) in girls over 2 years the urine is almost free of organisms, and in the writers' series entirely free of bacilli of the coli group.

J. D. ROLLESTON.

The non-protein nitrogenous constituents of the blood and the phenolsulphonaphthalein test in children (*Amer. Journ. Dis. Child.*, 1916, XI, p. 432).—J. S. Leopold and A. Bernhard.—Examination of the blood of 50 children free from renal disease gave the following results: The total non-protein nitrogen varied between 19 and 49 mgrm. per 100 c.c. of blood, the average being 28 mgrm.; the urea nitrogen varied between 8 and 21 mgrm., the average being 12 mgrm.; the uric acid varied between 0.6 and 3.2 mgrm., the average being 1.8 mgrm.; the creatinin varied between 0.5 and 4 mgrm., the average being 1.5 mgrm.; and the phenolsulphonaphthalein varied between 50 and 96 per cent., the average being 70 per cent. Sixteen cases with renal involvement were also examined, with the following results: (1) In acute nephritis the non-protein nitrogen constituents were found within normal limits, the phenolsulphonaphthalein excretion was diminished; (2) in chronic nephritis the non-protein nitrogen constituents were usually increased, while the phenolsulphonaphthalein excretion was diminished; (3) in passive congestion the non-protein constituents were normal, while the phenolsulphonaphthalein was diminished; (4) in one case of sarcoma of the kidney, with normal urinary findings, the non-protein constituents were normal, except uric acid, which was slightly increased; the phenolsulphonaphthalein excretion was diminished. The writers' conclusions are as follows: (1) Figures for the non-protein constituents of the blood and the phenolsulphonaphthalein test excretion of children free from renal disease are practically identical with those obtained

from adults; (2) the changes in these figures in children the subjects of renal disease correspond with the changes observed in adults; (3) the importance of the tests for diagnosis and prognosis amply demonstrated in adults will probably hold true for children. J. D. ROLLESTON.

Indicanuria in children (*New York State Journ. Med.*, 1918, xviii, p. 22).—W. J. Schuyler remarks on the frequency with which the finding of so-called indican in the urine seems to be associated with many of the ills and maladies of the growing child. The two chief preliminary conditions favourable to the development of indicanuria seem to be the ingestion of food proteids, especially that found in meat, in excess of the body requirement, and the presence in the intestinal tract of germ life which has the effect of producing putrefactive change in this proteid content. Children who show a more or less constant tendency to indicanuria are very seldom entirely well. They often seem nervously irritable and prone to outbursts of temper. They are often fickle in appetite, and crave foods that belong properly only to adults. The circulation never seems quite free or perfect, for the pink colour on pressure over the finger-nail will be found slow in returning. These children often suffer from cold extremities, there may be slight anæmia, and the blood-pressure is low. They are constantly taking cold, with long-continued nasal hyper-secretion or intractable nasal or bronchial cough. They often complain of rheumatoid pain and soreness.

J. ALLAN.

Non-parasitic chyluria and chronic nephritis in a child (*Amer. Journ. Dis. Child.*, 1916, xi, p. 455).—A. Hymanson reports a fatal case in a girl, aged 8 years, in whom the chyluria and nephritis followed measles at the age of three. Ascites was found in the fourth year, but paracentesis was forbidden by the parents. On prolonged treatment with tonics, creosote, and good nourishment, the ascites almost disappeared in eighteen months. At the age of six the child had frequent micturition, and the urine was milky and contained fat globules. No filaria and no blood was present. The necropsy showed chronic diffuse nephritis, chronic congestion of the lungs, hypertrophy and dilatation of the left ventricle, splenic hyperplasia with a fresh infarct, parenchymatous degeneration of the liver, and hypertrophy and dilatation of the bladder and ureters. Non-parasitic chyluria is excessively rare in childhood. Only five other cases have been recorded.

J. D. ROLLESTON.

Hypertension in nephritis in childhood (*Amer. Journ. Dis. Child.*, 1917, xiii, p. 354).—H. K. Berkley and J. M. Lee studied the blood-pressure in ninety-three cases of nephritis in children between the ages of 2 and 12 years, and came to the following conclusions: (1) The blood-pressure is raised in both the acute and chronic nephritis of childhood, and occasionally to a marked degree (250 mm. Hg. in a boy aged 10 years). (2) Systolic and diastolic pressures are not increased to the same degree, the former averaging about 20 mm. and the latter about 10 mm. above normal. (3) The pulse-pressure is increased, but this is not a constant factor and varies between the wide limits of 0.1 and 21. (4) The blood-pressure in chronic nephritis shows no constant elevation above that of acute nephritis. (5) The blood-pressure may, in rare instances, be of prognostic value. (6) No relation has been found to exist between the blood-pressure and the urinary findings. (7) Patients with marked œdema showed a slightly higher average blood-pressure than those with little or none. (8) Albumin-

uric retinitis is probably not common even in cases showing a marked increase in blood-pressure. The writers refer to the recent literature, including the papers of Rolleston (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1911, VIII, p. 433), Kaupe and Wolfensohn-Kriss (*ibid.*, p. 469), Mello Leitão, Gordon (*ibid.*, p. 470), and Judson and Nicholson (*ibid.*, 1915, XII, p. 180).

J. D. ROLLESTON.

Renal lithiasis in childhood ('*Brazil-Medico*,' 1917, XXXI, p. 365).—**N. Gurgel**.—A boy, aged 6 years, had been subject for the last three years to attacks of colic. The absence of jaundice, fever, nausea, and vomiting, and the course of the disease excluded hepatic or pancreatic lithiasis. The X rays showed two calculi in the pelvis of the left kidney, which were successfully removed. On examination they were found to consist of ammonio-magnesium phosphate and calcium oxalate. There was no hæmaturia or pyrexia, and even the albuminuria was not constant or present in large amount.

J. D. ROLLESTON.

Pyelitis of infancy—mode of infection ('*Amer. Journ. Dis. Child.*,' 1916, XII, p. 235).—**R. M. Smith** thinks that pyelitis is always a blood infection, and that bacteria frequently gain entrance to the blood by the lymphatics. In uncomplicated cases the lesion remains localised in the renal pelvis, where the organisms are excreted. Secondary infection of the kidney substance may occur by lymphatic channels from the pelvis. The source of infection in most cases, including males and females, is the gastro-intestinal tract. Some cases may arise from infection in the skin, teeth, or tonsils or some local septic process. Many cases in females arise from bacteria entering the blood *via* the lymphatics from the urethra, vulva, or vagina. Smith made seventy-one cultures from the vagina, vulva, or urethra of forty infants, from birth upwards, and young children. All the urethral and vulvar cultures were positive. The first organisms to appear were strepto- and staphylococci. *B. coli* were found in vaginal cultures as early as the fifth day.

J. D. ROLLESTON.

Focal lesions produced in the rabbit by colon bacilli isolated from pyelo-cystitis cases ('*Amer. Journ. Dis. Child.*,' 1917, XIV, p. 5).—**H. F. Helmholz** and **C. Beeler** carried out two series of experiments. Series 1 consisted of eight different strains of *B. coli* injected intravenously into sixty-six rabbits. Series 2 consisted of a mixture of *B. coli* and the pneumococcus injected intravenously into eleven rabbits. In Series 1 only eight, about 12 per cent., showed lesions that could be attributed to *B. coli*. None of the eight organisms used showed a special tendency to localise in the kidney, and when it did localise the focal lesions were just as likely to be in the other organs, especially the gastro-intestinal tract. The most characteristic lesion of *B. coli* seemed to be œdematous infiltration of the cæcum. In about 90 per cent. of instances the rabbit can excrete *B. coli* through the kidney with impunity. In Series 2, however, 60 per cent. of the rabbits showed definite lesions in the kidney.

J. D. ROLLESTON.

Colon bacillus pyelitis considered with reference to cases in boy subjects ('*Amer. Journ. Med. Sci.*,' 1917, CLIV, p. 707).—**G. W. Graves**.—Pyelitis in boys due to *B. coli*, though far more infrequent than in girls, is possibly even more important from the individual standpoint. In the male the possibility of extension of infection through the lumen of the

urethra may be excluded, and in all cases the intestine should be regarded as the potential source of the disease. The possibility of some systemic manifestations should be recognised, *e. g.* enlarged lymph glands, pronounced nervous symptoms, even meningeal in type, pains in the muscles, stiffness in the joints, and cough. The best routine treatment is the administration of sufficient alkali to make and keep the urine alkaline. In all obstinate cases autogenous vaccines should be used. Three illustrative cases are recorded in boys aged 3, 5, and 10 years respectively.

J. D. ROLLESTON.

Sarcoma of the kidney treated by the Roentgen ray (*Amer. Journ. Dis. Child.*, 1916, xii, p. 328).—A. Friedlander reports a case in a boy, aged 4 years, in whom the growth was so large that no surgeon would remove it. Twenty treatments were given with the Coolidge tube at intervals of about a week with considerable improvement. The tumours became much smaller in size, and the child gained in weight and strength. A month before death, which was due to measles, the tumour began to increase in size again. The necropsy showed sarcoma of the left kidney, with small metastases in the lungs and liver. Sections showed the most widespread and generally diffuse necrotic changes with no evidence of inflammatory reaction.

J. D. ROLLESTON.

Adeno-sarcoma of the right kidney in a girl, aged 6 years; removal; recovery (*Arch. de Méd. des Enf.*, 1917, xx, p. 257).—E. Kirmisson and Trétiakoff.—Eighteen months previously the child had first begun to suffer from pain in the right side of the abdomen, and from that time an increase in size of the abdomen had been noticed. For a long period the tumour developed slowly, and it was only during the last weeks which preceded the operation that its rapid course and enormous development indicated that it was undergoing a sarcomatous change. The urine did not contain any blood or albumin. Six weeks after the operation the general condition was excellent, the abdomen was supple, and there was no glandular enlargement.

J. D. ROLLESTON.

Polycystic disease of the kidney in an infant aged 3 months (*Amer. Journ. Dis. Child.*, 1915, x, p. 367).—J. S. Leopold and M. B. Künstler.—About two weeks after birth the mother noticed that the infant's abdomen was increasing in size. In the last two months the increase had been progressive. There were never any urinary symptoms. A large, irregular mass was palpable in each flank, extending from the costal margin into the flanks. The urine contained a very slight trace of albumin and a few granular casts. No red cells were present. As the tumours were growing larger and the general condition was getting worse, an exploratory operation was performed. Death took place the following day. Necropsy: The right kidney weighed 240 grm. and the left 230 grm. They were irregularly lobulated and of a spongy consistency, the meshes of the sponge being filled with a clear yellow fluid. There were a few good-sized cysts and innumerable smaller ones scattered throughout the kidneys. The liver was normal in appearance, but of unusually firm consistency, and showed microscopically enormous increase of the interlobular connective tissue and hyperplasia of the bile-ducts. The heart was hypertrophied but was otherwise normal. In infants the presence of a tumour in one or both flanks, accompanied by a nephritic urine and an hypertrophied heart, makes the presence of polycystic disease of the kidney almost certain.

J. D. ROLLESTON

Polycystic kidney in an infant (*Amer. Journ. Dis. Child.*, 1918, xv, p. 196).—**L. T. Royster** reports a fatal case in a male child, aged 8 months. The mother had noticed that the abdomen was unusually large before the child was one week old, and thought that it had grown since then. Two masses were apparent on inspection and palpation on each side of the abdomen and filled both flanks. The urine was uniformly negative except once, when it contained a faint trace of albumin. At the necropsy the kidneys completely filled both sides of the abdomen from the liver to below the crest of the ilium. They weighed 200 and 180 grm. respectively. Their surface was covered with cystic elevations from 2 mm. to 1 mm. in diameter. On section yellowish fluid exuded. The substance of the liver was rough and nodular, resembling atrophic cirrhosis. Microscopical sections showed atrophied liver cells and much connective tissue. The heart was not enlarged.

J. D. ROLLESTON.

Pituitrin in nocturnal incontinence of urine (*Urol. and Cut. Review*, 1917, xxi, p. 561).—**N. A. Mikhailow**.—In most cases of incontinence the essential cause is atony of the bladder accompanied or not by local changes (hyperæmia of the base and neck of the bladder, anæmia, and slight œdema of the mucosa, etc.). Mikhailow uses pituitrin in such cases, and finds that after three or four subcutaneous injections, given once a week, the incontinence disappears. He records nineteen cases, ten of which were in children, aged from 5–10 years, who were cured by doses of pituitrin ranging from 0.2 to 1.0 c.c.

J. D. ROLLESTON.

Surgical diseases of the urinary tract in children (*Amer. Journ. Dis. Child.*, 1918, xv, p. 116).—**A. Hyman**.—Urological diseases are not so infrequent in children as is supposed. Hyman reports eighteen cases in children, aged from 17 months to 13 years, including peri-nephritic abscess, renal tuberculosis, renal, ureteral, and vesical calculi, tumours of the kidney, congenital hydronephrosis and pyelonephritis. Many of the cases would have been overlooked had not the methods commonly employed in adults been used, especially cystoscopy, which will sometimes be indicated in spite of negative findings in the urine. Of functional tests indigo-carmin is the simplest and most reliable. X-ray examination should be more frequently used, and should precede cystoscopic examination. Operations on the kidney, ureter, or bladder are well borne in infancy and early childhood. In a series of over twenty-five major operations Hyman had only one immediate death, which was due to uræmia following decapsulation for subacute nephritis.

J. D. ROLLESTON.

Traumatic rupture of the left kidney (*Amer. Journ. Dis. Child.*, 1916, xi, p. 58).—**C. J. Bloom** and **R. E. Stone** report a case in a girl, aged 11 years, who fell from a wagon to the ground—a distance of $3\frac{1}{2}$ ft. The symptoms were pronounced shock, pain in the abdomen and lumbar region, temperature of 102° F., and tympanites. On laparotomy, twenty-four hours after the accident, a large hæmatoma, firmly organised, was found. Two separate lacerations of the kidney were found—one in the lower lobe, the other about $3\frac{1}{2}$ in. above. The capsule was completely torn away and in shreds; hence suturing was impossible. The field was irrigated with saline, a cigarette drain introduced, and the wound closed. Recovery took place.

J. D. ROLLESTON.

Nephrotomy for complete suppression of urine in a child (*Med. Journ. of Australia*, 1917, II, p. 333).—**H. I. Holmes**.—The following are the chief points in the case: (1) Onset similar to acute nephritis. (2) The age of the child, 1 year 8 months. (3) Complete suppression occurred on the fourth day of the illness. (4) Death on the eleventh day. (5) Great relief from nephrotomy followed by marked secretion of urine. (6) No rise of temperature or pulse-rate. (7) Intense engorgement of the kidney.

F. R. B. ATKINSON.

Edebohls' operation in nephritis in children (*Journ. Amer. Med. Assoc.*, 1917, LXIX, p. 525).—**J. L. Morse** reviews the clinical records and pathology of Edebohls' operation (*i. e.* decapsulation of the kidney) in cases of acute and chronic nephritis, and reports several cases of his own in which this method of procedure was attended with beneficial results in children. He is of opinion that the operation is of much value in properly selected cases of nephritis in childhood. It may save life and result in permanent cure in acute nephritis. No child ill with acute nephritis should be allowed to die, therefore, without giving it the advantage of the chance afforded by this operation. It may prolong life for considerable periods in a not inconsiderable number of cases of chronic nephritis, and may possibly, in rare instances, result in cure. It should, therefore, always be considered in all cases of chronic nephritis in childhood which are not responding reasonably well under medical treatment.

T. R. WHIPHAM.

Vesical calculi in the child (*Arch. Españ. de Ped.*, 1918, II, p. 65).—**P. Borobio**, in the course of 30 years, has seen 68 cases in his pædiatric clinique at Saragossa. Sixty-six were boys and 2 girls. The ages ranged from 22 months to 13 years; 37, or more than half, were under 6 years. Stones composed of uric acid, which are the commonest in the adult, are rare in the child. Oxalate stones are commoner in the child than in the adult, and stones consisting of phosphates, which are the commonest in the child, are less frequent in the adult. Of the 68 cases, in 5 the stones consisted of uric acid, in 24 of oxalates, in 35 of phosphates, and 4 were mixed. In only 3 cases were 2 stones present; in none more than 2. Vesical stones are common in poor children, probably owing to their vegetarian diet. The three principal symptoms are pain, incontinence of urine, and hæmaturia. Suprapubic or hypogastric cystotomy is the best operation for vesical calculi in the child. In 52 cases thus operated on by the writer only 3 died. Of the 66 cases 3 had relapses, the intervals between the 2 attacks being 4 years in 1 case and 2 years in the others.

J. D. ROLLESTON.

Preputial calculi in an infant aged 33 months (*Le Nourrisson*, 1917, v, p. 270).—**Ramaroni**.—Since the age of 3 or 4 months the child had had pain on micturition and had occasionally passed minute calcareous concretions in the urine. Large calculi could not be passed as the preputial opening could barely admit a grooved director. The dilated prepuce, which merely served as a covering to the glans without any adhesions, felt like a fowl's gizzard. After splitting the muco-cutaneous surface of the glans on its dorsal aspect, forty-five calcareous concretions were displayed, varying in size from a small pea to that of a grain of barley or rice, and situated round the corona, which was not ulcerated and was of normal appearance. The calculi weighed 2.720 grm., and were composed of ammonio-magnesium phosphate. Their formation was due to ammoniacal decomposition of the urine accumulated between the prepuce and glans.

J. D. ROLLESTON.

Plastic meatotomy (*'Glas. Med. Journ.,'* 1917, II, p. 132).—**J. L. Hamilton** points out that the operation of meatotomy is performed for the relief of retention of urine in young male children from ulceration round the urinary meatus. This ulceration is found after circumcision, and is due to the fact that phimosis produces, in many cases, a slight pouting or prolapse of the mucous membrane of the urethra. When the child is circumcised, this protruding mucous membrane is exposed to friction from napkins or clothing, and becomes eroded, forming a ring of ulceration round the meatus. The passage of urine over the raw surface being painful, the child retains the urine as long as possible. Meanwhile a crust forms on the ulcerated surface, sealing the urethral orifice, and so forming an obstruction. When the bladder is full—or overfull—this crust must be forced off from the meatus before urine can be passed, only to form again in the interval before urine is again passed. In the treatment of this condition the following operation has proved very successful. An intestinal needle, threaded with catgut, is passed into the urethra and brought out through the glans at one side beyond the ulcerated surface. A similar suture is inserted on the opposite side of the meatus, and by these two sutures the sides of the meatus are pulled apart, while the glans is divided down, by scissors or scalpel, from the lower margin of the meatus for a distance of an eighth to a third of an inch, varying with the size of the ulcer and the tightness of the meatus. A third suture is inserted from inside the urethra through the glans and is placed at the end of the incision—*i. e.* at what is now the lower angle of the meatus. The three sutures are tied with the knots inside the urethra to keep the edges of the meatus apart. Success invariably follows this operation. The retention disappears immediately and the ulcer is quite healed in a few days.

J. ALLAN.

Sexual precocity in the male (*'Amer. Journ. Dis. Child.,'* 1918, xv, p. 132).—**A. Strauch** reviews the literature and records a case in an imbecile boy, aged 11 years, whose genitals were remarkably developed. The larynx was very prominent and the voice deep. The case was classified as primary hyper-genitalism without anatomo-pathological changes, as there was no evidence of tumour of the adrenals or affection of the pineal or pituitary glands.

J. D. ROLLESTON.

The ætiology of infantile hydrocele (*'La Pediatria,'* 1917, xxv, p. 212).—**R. Vaglio** gives details of 55 cases of infants under 1 year, and found that in 24 there was evidence of luetic infection, in 5 it could not be excluded with certainty, while in 26 there was no evidence to prove or suspect syphilis. There was, therefore, direct evidence in 40 per cent. Out of 115 cases of hereditary syphilis with definite manifestations during the preceding three years the author found 20 cases of hydrocele.

VINCENT DICKINSON.

Notes on a case of embryoma testis (*'Med. Journ. of Australia,'* 1917, II, p. 5).—**H. M. Moran**.—The child was 8 months old, and the right testicle had been swollen for five months. The testicle was removed and the spermatic cord up to the internal ring. Microscopical examination revealed an embryoma and showed elements resembling cartilage, bone, unstriped muscle and tissue resembling the intestine. The condition is very rare. Recovery was uneventful.

F. R. B. ATKINSON.

Imperforate hymen; large serocolpos in a child (*'Amer. Journ. Obst.,'* 1917, LXXV, p. 398).—**S. Wiener**.—Although atresia of the hymen with consequent hæmatocolpos is fairly common, serocolpos, or distension of the vagina by serous fluid of non-menstrual origin, is exceedingly rare. Wiener records a case in a girl, aged 12 years, in whom the serocolpos formed an abdominal tumour reaching up to the umbilicus, and by its pressure upon the urethra and neck of the bladder caused retention of urine. On excision of the hymen, 30 oz. of thin yellowish-white turbid fluid were evacuated. The accumulation of the fluid was due to excessive activity of the glands of the endometrium and endocervix. J. D. ROLLESTON.

Condylomata acuminata in childhood (*'Dermat. Wochenschr.,'* 1917, LIV, p. 486).—**R. Frühwald** records two cases in girls, aged 11 and 13 years respectively, in both of whom there was a history of venereal infection. Case 1: A girl, aged 11 years, presented lesions on the perineum and genitals with the typical cauliflower appearance of condylomata. A vaginal discharge containing gonococci was present, and this was probably the cause of the vegetations. Case 2: A girl, aged 13 years, who had been suffering from a vaginal discharge and ardor urinæ for six weeks, showed condylomata round the anus. No gonococci were found in the discharge, but this may have been due to the fact that the discharge had already been treated. J. D. ROLLESTON.

Epidemic vaginitis in children (*'Amer. Journ. Med. Sci.,'* 1917, CLIII, p. 207).—**B. K. Rachford** says that vaginitis is one of the most prevalent infections in large cities, especially in hospitals and other institutions for female children. The measures in vogue for the cure of the disease and preventing its spread are quite unsatisfactory. Rachford has never seen an instance in which this disease was contracted by an adult, although the cases were constantly under the care of female nurses. No satisfactory explanation has been given of this immunity. Unlike the gonococcal vaginitis of adults, the cases due to sexual contact are practically negligible. The duration of the disease is usually from six weeks to six months, but it may last for years. A large percentage of apparently cured cases are subject to relapses, but there is a tendency to spontaneous cure at puberty. Complications and sequelæ are much less common than in the gonococcal vaginitis in the adult. Since 1905 Rachford has seen only one possible gonococcal complication (arthritis), in spite of a very large experience of the disease. He holds that the simpler methods of treatment, *e. g.* irrigating the infected parts once a day with two quarts of a normal saline solution followed by injections of 2 or 3 oz. of 1 per cent. solution of silver nitrate, are more effective than the more severe forms of treatment involving direct application of strong astringents and antiseptics to the vagina and cervix. The intractability of many of these cases is largely due to reinfection. The disadvantage of long-continued treatment is that it may lead to masturbation. Rachford thinks that there is no justification for excluding the cases from attending school. J. D. ROLLESTON.

The bacteriology of the urine in children with vulvo-vaginitis (*'Amer. Journ. Dis. Child.,'* 1917, XIII, p. 420).—**A. B. Schwartz**.—In 18 children over 2 years of age with chronic gonococcus vulvo-vaginitis catheterised specimens of urine showed a comparative absence of bacteria.

Most of the organisms found were either Gram-positive cocci or diphtheroid bacilli. In most cases they were in such small numbers that they were probably accidental contaminations from the urethra. The second portion of the urine representing the bladder flora was shown to be as free from infecting organisms as a series of normal children. Vulvo-vaginitis did not, therefore, increase the tendency to contamination of the bladder. Gonococcus cystitis is more likely to develop when the bladder has previously been infected by *B. coli*.
J. D. ROLLESTON.

Some fresh cases of vulvo-vaginitis in girls treated by anti-gonococcal vaccine (*Arch. de Méd. des Enf.*, 1917, xx, p. 245).—**Mlle. Condat** had previously reported with Comby sixteen cases treated with Nicolle's vaccine, and now adds twenty-four more in children, aged from 18 months to 11 years. Success was obtained in every case. Recent cases were most quickly cured, and the cure appeared to be permanent. The vaccine was given intra-muscularly in the antero-external aspect of the thigh. At first three injections a week were given, then as the discharge diminished two, and finally one. The course of treatment varied from a fortnight to four months. The average period was two months. J. D. ROLLESTON.

Vaginal discharge in children; study of 255 selected cases with special reference to the question of the diagnostic and specific value of smear examinations (*Boston Med. and Surg. Journ.*, 1918, CLXXVIII, p. 147).—**I. C. Rubin**.—The first 50 cases were treated by Barnett, whose paper appeared in 1913 (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1414, xi, p. 179). When Rubin first undertook the work he found that the diagnosis of gonorrhoea was made by smear examination. When, however, smears proved positive in a number of apparently healthy children with the slightest vaginal discharge, some other method obviously became necessary to establish gonorrhoeal infection. Rubin thinks that if the majority of children with a vaginal discharge are infected with the gonococcus, it must be a different organism from that occurring in adults. To establish the diagnosis of gonorrhoeal vaginitis he requires: (1) A purulent discharge from the vagina. (2) The intracellular Gram-negative diplococcus. (3) The organism must be grown on suitable culture media and properly identified as the gonococcus. (4) In case of doubt complement-fixation tests and agglutination tests should be used. In the absence of these tests there is no justification for regarding any vaginal discharge in children as gonorrhoeal or in treating it as such. The smear examination is unreliable and misleading and hence valueless as a method of diagnosis.
J. D. ROLLESTON.

Provocative and prophylactic vaccination in the vaginitis of infants (*Amer. Journ. Dis. Child.*, 1916, xii, p. 466).—**A. F. Hess**.—Necropsies show that in subacute and chronic cases of so-called vaginitis in infants the cervix is most frequently involved, and that the vagina generally shows no signs of inflammation. In institutions the greatest obstacle to controlling the spread of the disease is the difficulty of controlling latent cases. By inoculations of gonococcus vaccine (two injections of 100–400 millions) Hess was able to convert the concealed carrier into an open case. Vaccines also had some prophylactic value, and either completely protected or rendered subsequent infection of a mild character.

J. D. ROLLESTON.

Dermatology and Syphilis.

A case of acute erythematous lupus ('*New York Med. Journ.*,' 1917, cvI, p. 931).—**G. A. Brown** reports a case in a boy, aged 11 years, with no family history of tuberculosis. Towards the end of March his ears became inflamed, and appeared to be frost-bitten. The condition became progressively worse. On admission to the infirmary on April 11, there were several circumscribed, slightly scaly, reddish patches on both cheeks and nose. Temperature 100° F. On April 20 small inflammatory areas appeared on the tips of the fingers and toes, with atrophic changes in the centres. Temperature 103° F. Typhoid state. The von Pirquet, Wassermann, and Widal reactions were negative. Death from pulmonary oedema on May 14. No necropsy.

J. D. ROLLESTON.

Cutaneous reactions from proteins in eczema ('*Amer. Journ. Dis. Child.*,' 1916, xi, p. 441).—**K. D. Blackfan**.—Of 43 patients without eczema only 1 showed any evidence of susceptibility to protein by cutaneous and intracutaneous tests. Of 27 patients with eczema, 22 showed susceptibility to proteins such as egg white, cow's milk, or woman's milk. A positive reaction was shown by the appliance within five minutes of an urticarial wheal or of marked erythema and oedema at the point of scarification. If there was a reaction from one protein there usually was a reaction from several. The intracutaneous test was more delicate than the cutaneous, but gave results which were more difficult to interpret.

J. D. ROLLESTON.

Albuminuria in scabies ('*Thèses de Lyon*,' 1916-17, No. 77).—**H. Ubersfeld**.—Albuminuria is not uncommon in scabies. Among 260 cases of scabies observed by the writer 17 had albuminuria, while out of 110 cases suffering from other skin diseases albuminuria was present in only 2 (eczema and erythema multiforme). This albuminuria is particularly frequent in prolonged and neglected cases, and, as a rule, occurs in children and adolescents, more rarely in adults. The appearance, course, and cure of the condition depend on the course of the scabies which gave rise to it. It can only be cured by treatment for scabies. Two forms may be met with: (1) The true albuminuria of scabies, varying in amount and of transient duration, not accompanied by any subjective or objective symptoms, and disappearing under treatment for scabies. (2) The nephritis of scabies with all the ordinary symptoms of nephritis, usually disappearing with the scabies, but in certain cases out-lasting it and becoming chronic. The pathology is probably complex. Sometimes the albuminuria may be due to cutaneous irritation which acts reflexly on the renal circulation and produces more or less severe disturbance of function; more rarely it may be due to a true toxi-infective nephritis; and, lastly, it is possible that a toxin secreted by the acarus gives rise to the condition. The thesis contains the histories of twenty-two original cases, thirteen of which occurred in children, aged from 6 to 16 years.

J. D. ROLLESTON.

Skin manifestations with streptococcus infection ('*Amer. Journ. Dis. Child.*,' 1916, xi, p. 460).—**A. B. Schwartz**.—A male infant, aged 17 months, during an attack of broncho-pneumonia developed a generalised streptococcal infection manifested clinically by the almost simultaneous appearance of purulent arthritis, erythema nodosum, and erysipelas. A

streptococcus was cultivated from the blood, a joint effusion, and an excised nodule. Death took place after one month's illness. J. D. ROLLESTON.

The treatment of infantile impetigo and pyodermitis ('*La Pédatrie*, 1917, xxv, p. 718).—A. Gismondi calls attention to the value of Triboulet's method, which consists in the application of carbol-fuchsin solution, such as is used for staining tubercle bacilli, its action being chemiotaxic. The dry, superficial crusts are first removed by compresses soaked in alibour water, 1 in 2 of boiling water, or $\frac{1}{2}$ per cent. solution of sulphate of zinc. Then with a swab of cotton-wool every part is thoroughly impregnated with the fuchsin solution, using gentle, direct pressure. This dries rapidly and thus effectively isolates the cutaneous element from contact with the air. By continuing the application daily after a short time the crusts dry up, leaving, when they fall off, a surface already skinned over, or which rapidly cicatrises with a final application. The action of the fuchsin is explained by the chemiotaxis which it exerts on micro-organisms. These undergo a true staining, saturation, and a sterilisation *en masse* of the colonies of pyogenes which exists below the crusts in the thickness of the skin itself. It has also the advantage of withdrawing from the contact of the air the subjacent skin, preventing its attack by new micro-organisms. At the same time it exerts a true keratinising action on the denuded surface.

VINCENT DICKINSON.

Eruption of tuberculides of the type of lichen scrofulosorum round an intra-dermo-reaction to tuberculin ('*Arch. de Méd. des Enf.*, 1917, xx, p. 590).—L. Brocq.—A girl, aged 13 years, who had been suffering from enlarged glands of the neck for five years, and from lichen scrofulosorum for the past month, was given an injection of tuberculin on the left forearm (1 in 10,000); forty-eight hours later the temperature rose to 100.4° F., and an eruption developed with all the characters of lichen scrofulosorum near the area of the injection, though, strange to say, in a zone of $2\frac{1}{2}$ cm. radius round the point of injection the skin was quite free from eruption.

J. D. ROLLESTON.

Mongolian blue spots at São Paulo ('*Arch. de Méd. des Enf.*, 1916, xix, p. 536).—C. Ferreira.—During 1915, 371 infants attended the infants' dispensary at São Paulo; 343 were whites, 19 mulattoes, and 9 negroes. The Mongolian blue spots were present in 11, or 3 per cent., of the whites, in 10, or 52.6 per cent., of the mulattoes, and in 6, or 66 per cent., of the negroes. As in past years (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1915, xii, p. 251, and 1916, xii, p. 224) the frequency of the spots was greater among the mulattoes and negroes.

J. D. ROLLESTON.

Mongolian blue spots at São Paulo ('*Arch. de Méd. des Enf.*, 1917, xx, p. 537).—C. Ferreira.—During 1916, 426 infants attended the infants' dispensary at São Paulo, and were classified as follows: Whites, 392; mulattoes, 15; negroes, 19. The Mongolian blue spots were present in 8, or 2 per cent., of the whites, in 11, or 73 per cent., of the mulattoes, and in 13, or 68 per cent., of the negroes.

J. D. ROLLESTON.

A rare localisation of pediculi pubis ('*Dermat. Woch.*, 1917, liv, p. 699).—E. Klausner.—A boy, aged 13 years, who was under treatment for acne vulgaris, presented an aggravation of the condition through the

appearance of large comedones. Examination showed that this was due to the presence of pediculi, several large specimens of which were situated on the forehead between the acne nodules and comedones. No nits were to be found in the eyelids, eyelashes, or hair of the scalp, pubes, or axillæ. The boy was unaware of the presence of the parasites, as they had not caused any itching. Beyond removal of the pediculi no treatment was adopted.

J. D. ROLLESTON.

Clinical course and physical signs of hereditary syphilis of early age (*Amer. Journ. Dis. Child.*, 1916, xii, p. 364).—**A. Post.**—The diagnosis of hereditary syphilis may be very simple in severe cases in which wasting and external manifestations are prominent, or may present one of the most difficult problems in medicine. In the case of a very young baby with no certain signs, the physician should listen for noisy breathing, and to its cry. The hair should be carefully observed and the veins of the scalp. Alopecia is found at birth in a large proportion of cases. It is seldom if ever a complete loss, but is usually a general thinning of the hair. The soles need special inspection. The characteristic redness first appears in the heels. Careful X-ray study will be a great aid in diagnosis, as there is almost always periostitis of some bones.

J. D. ROLLESTON.

Contagiousness of congenital syphilis (*Münch. Med. Woch.*, 1918, lxxv, p. 71).—**Werther** records ten cases of congenital syphilitic children who infected their nurses on the finger, tonsil, lips, or nipple. These cases contradict Pfaundler's statement that congenital syphilis never, or hardly ever, spread infection. Many cases doubtless escape notice. Erroneous diagnoses are often made of an extra-genital chancre, and after it has healed it is forgotten, and cases who are seen with later syphilitic phenomena are regarded as having acquired syphilis in the ordinary way.

J. D. ROLLESTON.

The significance of certain dental stigmata of congenital syphilis (*Arch. of Ped.* 1917, xxxiv, p. 765).—**J. S. Wall** says that lesions of the first permanent molar are just as typical of congenital syphilis as Hutchinson's teeth, although they are less conspicuous. The sixth-year molar is the only member of the permanent set to dentify during intra-uterine life. The incisors and canines pass through this process in the first few months after birth, and will show the typical stigmata if the disease is active at this period of infantile life. The changes in the sixth-year molar consist of an erosion, irregular in form, involving a third, a half, or even the whole of the surface of the tooth. There is often a pulpy-looking mass of a dirty yellow colour occupying most of the surface of the crown. This tooth, which has been called "the honeycombed molar of hereditary syphilis," is spoken of by Wall as "the mulberry molar," the worm-eaten aspect of the cutting surface being compared to the appearance of the tip of a mulberry.

J. D. ROLLESTON.

On the significance of Carabelli's tubercle (*Presse Méd.*, 1918, xxvi, p. 116). **E. Jeanselme.**—In 1844 Carabelli described a supernumerary cusp on the palatal surface of the first upper permanent molar. According to Jeanselme's statistics it is present in 17 per cent. of French adult males, in 17 per cent. also of the boys and girls in the Hospice des Enfants Assistés, and in 20 per cent. of young deaf-mutes of both sexes. In a large number

of persons it exists in a rudimentary condition. It has been found in all races and in all periods. Jeanselme has seen it among negroes, the inhabitants of Madagascar, North American Indians, and Pacific islanders. It was not uncommon in the neolithic period. There is no justification for regarding it as a sign of inherited syphilis. J. D. ROLLESTON.

Morbus cæruleus of syphilitic origin (*Arch. de Méd. des Enf.*, 1916, xix, p. 149).—E. Jeanselme records a case in a girl, aged 11 years, whose father and mother were syphilitic. The child had shown an eruption around the anus two weeks after birth, and later onychia of several fingers. After an attack of pulmonary congestion at the age of 8 years she presented all the symptoms of morbus cæruleus. The livid tint was most marked on the cheeks, ears, nose, chin, wrists, hands, and lower limbs, and was aggravated by the least effort and cough. The fingers were clubbed. The Wassermann reaction was positive both in her and a younger brother, aged 6 years, who also showed a degree of cyanosis and clubbed fingers, though the heart and other organs appeared normal. A systolic murmur was heard over the pulmonary area conducted to the clavicle. J. D. ROLLESTON.

Syphilitic disease of the thymus in infants and the mode of origin of the Dubois abscesses (*Amer. Journ. Dis. Child.*, 1917, xiii, p. 158).—J. Oliver.—Syphilitic disease of the thymus in infants is manifested primarily by a degeneration of the lymphocytes and Hassall bodies with a hypertrophy of the reticular epithelium and hyper-regeneration of the concentric corpuscles. The process may give rise to the formation of cystic cavities—the so-called Dubois abscesses—by the dilatation and fusion of the degenerating Hassall bodies. Oliver records an illustrative case in an infant, aged 6 weeks, which died of pneumonia. The necropsy showed pneumonia alba, osteochondritis syphilitica, interstitial hepatitis, as well as miliary gummata in the liver and subacute glomerulonephritis. The thymus was of normal size, but contained fibro-cysts. J. D. ROLLESTON.

Spasm of the glottis and generalised convulsions with the facial phenomenon in syphilitic rickets (*Le Nourrisson*, 1916, iv, p. 291).—A. B. Marfan records a fatal case in a female infant, aged 20 months, in whom the predominance of the bony deformities in the skull, the development of the superficial veins of the forehead and temples, and enlargement of the spleen suggested syphilis as the cause of rickets, especially as there was no evidence of tuberculosis or chronic digestive disturbance. Wassermann's reaction could not be performed, but the diagnosis was confirmed by the discovery of miliary gummata in the spleen post mortem. The parathyroid glands were normal both on naked eye and microscopical examination. J. D. ROLLESTON.

A family of heredo-syphilitics; five appendicitis cases among eight children (*Ann. des Mal. Vénér.*, 1917, xii, p. 257).—Gaucher.—A girl, aged 10½ years, who had had interstitial keratitis at the age of 8 and been cured by mercurial inunction, was brought to hospital with symptoms of appendicitis. Wassermann reaction positive. She was the seventh child of the family. The eldest child, a girl, who had died at the age of 18 of chest trouble, had suffered from chronic appendicitis. The second, a girl, aged 20, had died after an operation for perforation of the appendix. The third child had died at 15 of appendicitis and acute peritonitis, without an

operation. The fourth child had died in early life of meningitis (?). The fifth child had died shortly after birth. The sixth child, now aged 13, had been operated on for appendicitis at 12. Her palate was highly arched and her tongue fissured. The eighth child had died in early life. The mother had had three miscarriages, the last of which proved fatal. The father admitted gonorrhœa but denied syphilis. The Wassermann reaction, however, was positive. Gaucher knows of three other families, one consisting of two, and the others of three children, in which the three fathers were syphilitic, and all the children had been operated on for appendicitis.

J. D. ROLLESTON.

Syphilitic meningitis and meningeal reactions in syphilis (*'Arch. de Méd. des Enf.'*, 1916, xix, p. 579).—**M. Laverne** records four cases in children, aged from 18 months to 13 years, which all terminated in recovery under mercurial inunction. In none of the cases were there any clinical signs of congenital syphilis except a natiform skull and convergent strabismus in one case. The infant, aged 18 months, was suffering from pneumonia. The cerebro-spinal fluid in each case was under hypertension, clear, showed lymphocytosis, and a positive Wassermann reaction, but no micro-organisms.

J. D. ROLLESTON.

Acute syphilitic meningitis in an infant 12 months old (*'Amer. Journ. Dis. Child.'*, 1918, xv, p. 201).—**D. B. Leitch** records a fatal case in a male infant in which the gradual onset, vomiting, constipation, and drowsiness suggested tuberculous meningitis. Three tuberculin skin tests, however, were negative, and no tubercle bacilli were found in the spinal fluid. The symptoms also differed from those of tuberculous meningitis in the continued absence of fever and convulsions, the turbidity of the spinal fluid, and the relatively small percentage of lymphocytes. Examination of the fundus for tubercles showed typical syphilitic choroiditis. The spinal fluid was then examined for spirochætes, which were found in large numbers. The necropsy showed irregular patches of greyish-white exudate covering the vessels of the parietal and temporal lobes. No fibrino-purulent exudate was seen. The brain substance showed considerable softening. The ventricles were dilated, and contained turbid fluid. Smears from the exudate on the surface and from that in the ventricle showed numerous spirochætes. The liver showed syphilitic hepatitis. Acute syphilitic meningitis in infancy is very rare. Only about six cases have been reported. In no previous case have spirochætes been demonstrated during life in infancy.

J. D. ROLLESTON.

A comparative study of the luetin and Wassermann reactions in infancy and childhood (*'Amer. Journ. Dis. Child.'*, 1916, xii, p. 387).—**L. R. De Buys** and **J. A. Lanford** carried out 350 Wassermann reactions and 100 luetin tests in 175 children, aged from 12 days to puberty. Their conclusions were as follows: (1) The Wassermann reaction is not so valuable as the luetin test in syphilis. (2) It is impossible for a mother to bear a child with positive tests without giving positive tests herself. (3) The luetin test should not displace the Wassermann, as both tests serve distinct purposes, the Wassermann to give evidence of the presence of anti-bodies in the circulation indicating an active process, while the luetin not only gives this evidence, but also indicates an existing syphilitic condition, even though it be inactive. (4) The luetin tests must be differentiated from the single

reaction produced by the intradermal reaction of sterile, inert, foreign material. It is also influenced by certain drugs (iodides), which may cause a pseudo-reaction. (5) Luetin reaction should not be considered negative till sufficient time shall have elapsed to warrant such a reading. J. D. ROLLESTON.

The value of the Wassermann reaction in the newly-born (*Arch. of Ped.*, 1918, xxxv, p. 40).—H. H. Yerington, as the result of the examination of 480 cases, came to the following conclusions: A diagnosis of syphilis in an infant under 10 days of age cannot be made by a positive cord or heel blood without evidence of lues elsewhere. The results obtained from examination of heel blood are more reliable than those obtained from examination of cord blood. The placental work seems to show that though the mother's blood may be negative, an active syphilitic process may go on in the placenta, resulting in still-birth or abortion. It is most important that all the children should be followed up for a period of years and their blood examined from time to time. J. D. ROLLESTON.

Ante-natal treatment of congenital syphilis with Salvarsan (*Glos. Med. Journ.*, 1918, i, p. 65).—L. Findlay finds that ante-natal treatment with Salvarsan, reinforced by mercury, is superior to that with mercury alone. By this method not only is a larger proportion of the children healthy—various statistics record 100 per cent. of healthy children—but it would seem that without further treatment the mother can continue to bear healthy infants. He thinks it advisable that all records of miscarriages and still-births should be kept, and those due to syphilis determined, when the syphilitic mothers could be treated with mercury and Salvarsan, and the health of their future children almost certainly guaranteed.

J. ALLAN.

Treatment of hereditary syphilis (*Amer. Journ. Dis. Child.*, 1916, xii, p. 395).—P. H. Sylvester.—During pregnancy the mother should be treated vigorously. At birth, whether showing lesions or not, and whether the Wassermann reaction is positive or not, the baby should receive inunctions of 25 per cent. mercurial ointment for about two weeks, during which time if lesions occur, or the infant gets worse, it should have 0.15 or 0.2 gm. neosalvarsan in 5 c.c. distilled water intravenously at weekly intervals, meanwhile continuing the mercury. As soon as the lesions disappear the neosalvarsan should be stopped, and the mercury alone should be continued for several months. At 6 months a Wassermann test should be made, and if positive the mercury should be continued as before. If negative the mercury should be given intermittently every other week or every other fortnight, but should not be omitted for longer than a fortnight. At 1½ years a Wassermann test should be made, but the result should have no effect on treatment. At 2 years treatment may be stopped if the Wassermann reaction is then negative, and if again negative at 2½ years the patient may be considered tentatively cured.

J. D. ROLLESTON.

Acquired syphilis in children (*Thèses de Paris*, 1917-18, No. 90).—P. Rimetz alludes to Manne's thesis (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1910, vii, p. 415) and the paper by Gaucher and Flurin (*ibid.*, 1911, viii, p. 283), and reports two cases in a boy, aged 2½ years, and a girl, aged 8 years, in whom the chancre was extra-genital (perineum in the boy

and tonsil in the girl), and two cases in girls, each aged 3 years, in which the chancre was situated on the vulva. More than two-thirds of the cases of acquired syphilis in children have a non-venereal origin. Another important characteristic of acquired syphilis in children is that it is frequently contracted in the family either from an infected member of the family or a toilet article or plaything.

J. D. ROLLESTON.

School Hygiene.

Scope of practicable examination in routine school medical inspection (*New York State Journ. Med.*, 1916, xvi, p. 493).—C. P. McCord pleads for standardisation of methods in school medical inspection, and outlines a practical scheme for routine work in this connection. The purposes of school health work should be: (1) To detect and exclude cases of contagious disease, and to prevent epidemics of the same among school children. (2) To help in maintaining sanitary conditions and proper physical equipment in the schools. (3) To detect physical defects, and secure correction of these defects through the co-operation of school officials, school nurses, parent and family, or dispensary physician. (4) To aid the Board of Education in passing judgment on the physical fitness of teachers and janitors. (5) To teach practical hygiene in school and home through the agency of the teacher and the school nurse. (6) To make special studies of the physical and mental sides of child life, so that the best ways may be determined for giving the child the training suited to his individual needs. (7) To assist in furnishing to school children scientific physical training and proper recreational facilities. (8) To diagnose mental deficiency. (9) To co-operate with all agencies concerned in the social, moral, mental, and physical improvement of the child. The author makes the following suggestions: (1) One doctor and two nurses for every 3000 children. (2) A full-time inspector and two nurses in every district of 30,000 population. (3) Part-time inspectors to be employed for at least two hours daily for the entire school year. (4) If the choice between a full-time nurse or a part-time doctor to initiate the work is imperative, the full-time nurse is the more desirable. (5) The special training of school nurses, in addition to the regular hospital course and registration under the laws of their State, and their selection as school nurses on the strength of their credentials and apparent personal fitness as considered by the executive under whom they work. (6) Treatment by medical inspector, and development of school dispensaries where local clinical facilities are inadequate. (7) The recognition of the fact that the type of examination for the purposes of routine work of necessity will be modified by variations in the "working unit," physical equipment, etc., and that standardisation of these features must be our first consideration. (8) A careful selection of higher executives in the work in order to insure the propagation of intelligent public opinion, and a comprehension of the development of the work along constructive lines.

J. ALLAN.

Some practical experiences in medical inspection in rural sections (*New York State Journ. Med.*, 1916, xvi, p. 593).—W. A. Have draws attention to the lack of uniformity in methods of school medical inspection in country districts, and makes the following suggestions: Only physicians interested or willing to take an interest in the work should be

utilised as medical inspectors; the utmost care should be exercised in all examinations, and definite information should be given to parents as to defects found; the physician should receive a fee commensurate with the services rendered; physicians, dentists, teachers, parents, pupils, and nurses should co-operate in the entire system of school inspection. The real success of school inspection will be measured by the thoroughness with which the examinations are made and the results accomplished, and by our ability to teach health education.

J. ALLAN.

Medical inspection and supervision of school children in Edinburgh (*Edin. Med. Journ.*, 1917, I, p. 442).—J. Hally Meikle gives a general survey of medical school inspection work in Edinburgh, and describes the means adopted to provide treatment for the various defects and conditions found under the following heads: (1) Treatment of conditions due to neglect; (2) treatment provided at the school clinic; (3) treatment by means of special schools and classes.

J. ALLAN.

The care of children of the school ages (*Edin. Med. Journ.*, 1917, I, p. 336).—L. D. Cruickshank maintains that, broadly conceived, the organisation of school-health administration involves: (1) Systematic and special medical inspections; (2) the provision of adequate facilities for efficient medical treatment and the correlation of inspection and treatment in all its forms—curative and preventive; (3) the medical supervision and after-care of children who have undergone medical treatment; (4) the modified educational treatment of exceptional children, whether in ordinary schools or in special schools, and the control and direction of special school programmes; (5) the systematic supervision and control of the hygiene of all day-schools; (6) the systematic supervision of physical education among all classes of children; (7) supervision of schemes for the feeding and clothing of necessitous children; (8) co-operation with public health authorities in the control of infectious diseases; (9) co-ordination of the work of school health administration with child-welfare agencies outside the scope of the School Boards; (10) the giving of advice with regard to school sites, school playgrounds, new buildings, or anything connected with the structure or internal arrangements of the school which might affect the health of the pupils.

J. ALLAN.

The care of children under school age (*Journ. State Med.*, 1916, xxiv, p. 207).—A. S. M. MacGregor states that the medical inspection of school children has clearly demonstrated that it is illogical to withhold remedial and preventive measures from the antecedent ages of life. The organised care of young children is important, though more difficult than that of school children. Healthy homes and open spaces must be prominent among general measures. As regards the children themselves, the nursery school is good and is worthy of further extension. There is no reason why the organisations and clinics established under the Notification of Births Act should not be available for children beyond the end of their first year. Education, which can only be effected slowly and by persistent effort, is an important element in the matter, and has to some extent been attempted by the formal instruction of mothers. Satisfactory medical care will probably not be attained until the unification of medical services is undertaken. Whatever practical scheme is evolved to meet the necessities of the case, it is to be hoped that due recognition will be given to the importance of

investigation of the diseases of children, and of the effects of environment on health, as the age group under discussion is particularly barren of scientific data. J. ALLAN.

The care of children under school age (*Journ. State Med.*, 1916, xxiv, p. 178).—**D. Forsyth** emphasises the importance of this problem, and points to the fact that medical inspection of school children has disclosed a widespread condition of ill-health even among the youngest school entrants. He discusses the circumstances favouring the deterioration in health in the first five years of life, and he reviews the methods by which improvement in this respect might be brought about. J. ALLAN.

The principles of organisation and administration in child-welfare work (*Journ. State Med.*, 1917, xxv, p. 33).—**J. E. Lane-Clayton** deals briefly with post-natal methods, examines in greater detail the causes of difficulty in ante-natal work, and suggests possible solutions. The points discussed include (1) post-natal child-welfare work, (2) the aims and work of a child-welfare centre, (3) ante-natal child-welfare work, (4) the rôle of the midwife, (5) maternity nursing, and (6) child-welfare service. J. ALLAN.

The open-air school child as a type (*New York State Journ. Med.*, 1916, xvi, p. 595).—**E. Durney** points out that the type referred to is the child whose physical inefficiency, from whatever cause, limits his activity in normal channels. The common picture is one of disordered nutrition, with its accompanying systemic disturbance. He thinks, however, the term "open-air school type" should be made to include a majority of all children attending school. The benefits of out-door air, recognised as both prevention and cure, should be extended to the great mass of public school teachers and pupils who at present spend their school hours in rooms where the open window is indicative of transgression of the school regulations. J. ALLAN.

Residential treatment of delicate and pre-tuberculous children (*Med. Officer*, 1918, xix, p. 45).—**G. Jessel** emphasises the importance of open-air day schools and classes, which should become an integral part of our educational system. Some form of residential institution is also required, in which selected children will be well fed and cared for, enjoying to the fullest extent the much-needed open-air life, sunshine and rest. These residential open-air schools usually admit delicate and pre-tuberculous children, but occasionally also slight and non-infectious cases of pulmonary tuberculosis and certain chronic cases, *i. e.* glands, bones, joints, etc., where open-air conditions and good feeding are the chief indications. They afford opportunity for a change of environment sufficiently long to lead to definite improvement in health. Twelve such schools had been established in 1916, and grants for their aid are sanctioned when they are approved by the Board of Education. J. ALLAN.

Some observations on the vaccination mark (*Med. Press*, 1917, i, p. 120).—**E. Thorp**, during the medical inspection of school children, found the constant examination of the vaccination scar showed so many variations in the cicatrix at the different age groups that he formed the opinion that a systematic examination and investigation might be productive of interesting information as to the duration of scars on the human skin.

Three main groups of children came under observation—the infants or “entrants”; intermediates, aged 8 and 9 years; and “leavers,” 12 to 14 years. A table gives information regarding the number examined in each group and the exact state of the vaccination mark. The table reveals many interesting points; amongst others, the decline in vaccination is well shown; but a more particular point noticed is the great change in character of the scar which appears in the 6 to 7 age group (children born in 1909). The marks were smaller, less numerous and less deep. It was also noted that each year the new children had a less successful inoculation. The author, though a firm vaccinationist, thinks that children are too young when vaccinated, and that the operation in the early months of infancy retards the child's welfare. He is of opinion that it would be wise to postpone it until the end of the second year of life, when the child would be much stronger, the objection of the parent would be in many cases removed, and the physique of the race would be greatly improved. J. ALLAN.

The deaf child from the standpoint of the educator (*New York State Journ. Med.*, 1916, xvi, p. 21).—J. D. Wright divides deaf children into three general groups for educational purposes: (1) Those who from birth or early infancy have been partially deaf, and by reason of their impaired hearing cannot make satisfactory progress in ordinary schools. (2) Those whose hearing has been seriously impaired or destroyed after speech had been acquired. (3) Those who have been totally deaf from birth or early infancy. The author calls for the abandonment of silent methods in teaching such children, and strongly urges the importance of choosing oral schools. J. ALLAN.

Physically defective children and the problem of their education (*Dub. Journ. Med. Sci.*, 1916, i, p. 95).—W. A. Winter emphasises the importance of this problem, discusses how such cases are dealt with in London, and gives details of the work and management of the residential school at Swinton House, Manchester. Every endeavour should be made, by means of attention to the mental, moral, physical, and technical education of these children, to turn them into useful, if not fully effective citizens, who will, in some cases at least, be capable of being self-supporting, instead of, as is too often the case at present, becoming human derelicts, living entirely on charity or the public rates. J. ALLAN.

What tests in childhood are best calculated to throw light upon the capacities of mental defectives for future work (*Lancet*, 1915, ii, p. 124).—W. A. Potts thinks that the most satisfactory decision would be attained by taking a large group who were submitted to many tests ten years ago, and inquiring what tests those now supporting themselves passed, and in what directions the unsuccessful failed. This information, however, is not forthcoming. The author deals with the subject by considering what are the causes of success and failure in the careers of normal individuals, and then, if we believe that these will operate also in the case of defectives, devising a set of tests to determine them. He also takes a group of defectives over twenty years of age, earning wages, and finds what good they have in common, comparing them with the group who are unemployed. Another plan considered is to investigate all known tests, and to decide which will be of service. As regards the causes of success and failure in life, the former, especially if it is to be marked, depends on the possession of

four special qualities: (1) ability; (2) strength of character and will-power, in which, as a subsidiary, should be included ambition; (3) good health; and (4) pluck. Conversely, among the causes of failure are lack of ability, bad health, weak or bad character, and a faint heart. All these can be seen in operation in the history of defectives. Among them bad morals rank high. Many are moral imbeciles, and that is why they ultimately drift into institutions. Regarding the capacities of a group of defective wage-earners as compared with the less successful, the author bases his inquiry on how far success in after-life could be foretold by the school records. On studying the records for reading, writing, arithmetic, and manual work, it was obvious that aptitude for manual work was the essential. It may be said that a defective who at school is either very good or merely good at manual work and also at every school subject is certain to get work afterwards, unless he has some serious disability in addition to mental defect. As regards other school subjects, reading does not seem to be of much use as a guide, arithmetic gives a better clue, and writing is also some guide—at any rate in a negative way. An important index to success after school is afforded by the fact that defectives who respond to special school teaching may be divided into three groups: (1) those who improve continually; (2) those who improve up to a certain age—twelve or thirteen—and then remain stationary; (3) those who improve till a certain age and then actually go back. This can be determined by the Binet tests—the best for the purpose at present. Finally, the author discusses individual tests, and shows how far these may be useful in regard to the matter in question.

J. ALLAN.

Care of mentally defective children (*Edin. Med. Journ.*, 1917, I, p. 375).—R. D. Clarkson says that mental defect should be detected in early life. It will always become apparent, at latest, during the years a child spends at school. When it is evident the case should be notified to the District Boards of Control, and from that time till the case dies, or till it is quite certain that a mistake has been made and that the case is one of delayed development and not of genuine mental defect, the Mental Deficiency Committee of the Board of Control should be responsible for seeing that the case is properly provided for, and is placed in such surroundings that no danger to itself or to others can result. Without this amount of interference with the liberty of the subject, and with the supposed rights of parents to do what they like with their children, there will always be a certain amount of that social injury and moral damage which the Royal Commission found to be so prevalent, and which the Mental Deficiency Act was introduced to prevent.

J. ALLAN.

After-training of defective children (*Glasg. Med. Journ.*, 1917, I, p. 354).—G. A. Brown describes the results of special investigations respecting the conditions of defective children as wage-earners after leaving school, and proceeds to show that much useful and valuable material is being wasted at present because of the want of organisation, supervision, and control. Many of our special school children recover from their physical defects and are quite able to take their places alongside their normal fellows and become full wage-earners. Many others, however, are handicapped by physical and mental disabilities which are permanent, and prevent these children being employed because of the requirements of employers under the Insurance and Compensation Acts. When some of them do obtain employ-

ment they are, as a rule, only partially supporting themselves, and their wages are less than what might be obtained under a system of control. Here the greatest waste occurs, and little or no return is obtained for the money expended in the training of these children. Suggestions are made for the training of defective children in selected cases in trade schools and after leaving school, and the establishment of central workshops for these children is advocated. In this way the continued employment of the children in the trades in which they have been trained would be provided, and the best possible returns for their work would be likely to be secured. The whole of the work of these suggested central workshops, whether day or residential in administration, would provide for the employment of the worst cases of physical defect, and would also ensure that the poor, unfortunate, "home-ridden" cases, for whom practically nothing is done at present, could be profitably employed. Such workshops should be under the care of organised after-care committees.

J. ALLAN.

Reviews.

THE JEWISH CHILD, ITS HISTORY, FOLKLORE, BIOLOGY, AND SOCIOLOGY.
By W. M. FELDMAN, M.B., B.S.Lond. With an Introduction by
Sir JAMES CRICHTON BROWNE. With 2 plates and 19 illustrations.
Baillière, Tindall & Cox. London, 1917. Price 10s. 6d. net.

THIS is an excellent book. It is packed with information and its contents are not only interesting in themselves, but are written in an agreeable and interesting way. Well arranged, printed on good paper in a clear, bold type and with a full index, it will be enjoyed by a great variety of readers. It appeals to the scholar by its erudition and fresh literary style, to the medical historian, to the eugenicist, to the ethnologist, and to all Jews, Christians, and Gentiles by its touches of humour, by its easy, familiar language, and by the light that it throws on the manners and customs of the most interesting of all races. No one concerned in child welfare should fail to read it. In its compact fulness and scholarship and in the abundance of its quotations it reminds one of Burton's 'Anatomy.'

The author has managed to give a pre-Raphaelite picture of Jewish life in which freshness and variety of colour are combined with a sort of philosophical detachment and great broadness of view.

The strong national and family feeling of the Jews is admirably portrayed and so are his inconsistencies—his hidebound conservatism on the one hand and his tendency to innovation on the other. Thus the Jews not only possessed a strong æsthetic sense and appreciation of vigour and intelligence, but understood the importance of heredity and of eugenics. Hence there were injunctions in the Talmud that in choosing a wife care should be taken that there was no epilepsy nor other hereditary taint in the family (p. 21), and there were other regulations that people with physical blemishes and imbeciles should not marry. Yet the Rabbis permitted the marriage of deaf mutes (p. 31), and the otherwise physically and mentally defective (p. 398) were so encouraged to marry together that they became far more numerous among Jews than among other races.

So also until recent times the Jewish race was strictly enjoined to

multiply and to cover the face of the earth, and it was one of the most prolific. Yet now, "contrary to the general popular belief, the birth-rate among Jews is lower than that of non-Jews." This is partly due to the higher age of marriage among modern Jews and partly to town-dwelling. "Another probable cause in the case of Western Europeans and of American Jews is the deliberate limitation of the size of the family for economic reasons." These, however, are not the only causes, for "it is to be noticed that even in Eastern Europe, where the Jews are strictly orthodox, and, therefore, not only marry early, but do not restrict the size of their families, the birth-rate among them is smaller than among their non-Jewish neighbours (when calculated per 1000 population)" (p. 406).

The book contains many anecdotes, fables, myths, and pithy sayings which add to the interest and are pertinent to the subject in that they open a window into the Jewish mind.

H. G.

REPORT ON THE PREVENTION OF MORTALITY AND DISABLEMENT DUE TO MEASLES AND PNEUMONIA IN CHILDREN. By A. SALUSBURY MACNALT, M.D., with a Preliminary Memorandum on Administrative Measures against Measles, by S. W. WHEATON, M.D. London: H.M. Stationery Office. 1918. Price 1s. 6d. net.

DR. WHEATON'S memorandum deals with the measures which should be and have been taken by sanitary authorities at the patient's home for preventing mortality and disablement from measles. Such measures consist in visits to the home made by the health visitor on receipt of the notification, especially if a doctor is not in attendance, nursing provision, and the provision of medical assistance.

The first part of Dr. MacNalty's report is devoted to measles. A statistical study of the mortality, incidence, and complications of the disease is followed by a discussion of statistical evidence with a view to remedial measures. The medical aspects of the problem are then considered, including the pathology, bacteriology, symptomatology, diagnosis, and treatment, special stress being laid on the importance of rigorous local antisepsis. Dr. MacNalty appears to accept the view of Thursfield, whose report was noticed some years ago (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, xi, p. 334), that a frequent cause of death is a broncho-pneumonia set up by the *Streptococcus pyogenes*, and that this probably originates in a septic condition of the mouth, fauces, and naso-pharynx.

Lastly, certain practical measures for preventing mortality and disablement from measles are considered, such as care of the patient at home, including after-care, institutional treatment, and treatment in a convalescent home. In the second part of Dr. MacNalty's report, which deals with pneumonia in children, the subject is also discussed under the three headings of Statistical Evidence, Medical Aspects, and Practical Measures. The writer regards the results of vaccine and serum therapy in pneumonia as disappointing, and considers that the reduction of child mortality must chiefly depend on preventive measures and skilled attendance in the course of the disease.

J. D. R.